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MOTOR CYCLING

No. 473. VOL. XIX.
TUESDAY, 3RD DEC.
1918.

Registered at the G.P.O.
as a Newspaper.

FOR ALL

"When The Boys Come Home"



WHEN the boys come home, when the petrol restrictions are removed, and we shall once again be able to enjoy all the pleasures of motocycling, the handy little Douglas will be in great demand. No other motorcycle has such a wonderful war record, and the new Douglas models will be the talk of the motocycling world.

We suggest you place the order for your new Douglas without delay—deliveries are being made at the earliest possible moment. Why not write for full details to-day to Dept. "A"?

DOUGLAS MOTORS LTD.,
KINGSWOOD, BRISTOL,
39, Newman Street — London, W.I.



Douglas

B RITISH MAGNETOS L IGHTING & IGNITION SETS H MAGNETOS

C OMPANY LTD
204 TOTTENHAM COURT ROAD LONDON W.I.

L O D G E

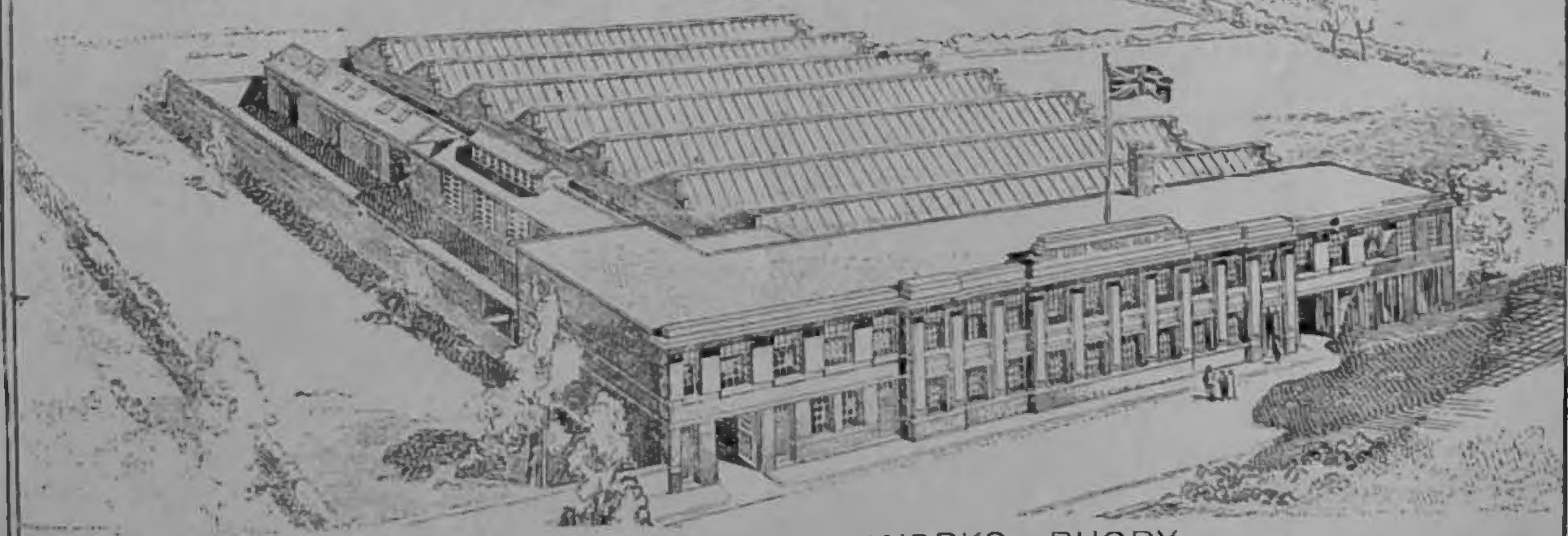
P L U C S

Post-War Design

If the Lodge Plug excelled all others before the war, then unquestionably the post-war Lodge Plug will do so more than ever.

The Lodge Plug has been the typical aircraft plug throughout the war, and the exacting conditions imposed by modern aircraft engines have brought about an unexampled perfection in plug design.

THE
LODGE SPARKING
PLUG CO., LTD.,
RUGBY.



THE LODGE PLUG WORKS, RUGBY.



The Fables of Fame

The Tenth.

On the advent of the most memorable day in the History of the World, when four long years of bloodshed and antagonistic action 'twixt the greatest nations of the earth gave way to Peace, the multitudes rejoiced as they had never done before. Each vehicle, capable of being moved by steed or motive power, was commandeered by rich and poor alike, that they might give expression to their gladness by riding through the streets of their respective cities waving tokens of fidelity and everlasting gratitude to those who fought for them. This day did truly mark the beginning of great happiness and freedom for the world in which the

CLYNO

THE Side-car Motor Cycle

would play a mighty part. Its coming had been eagerly awaited by some thousands who'd ordered it to be delivered to them when those who were to make it were freed from other tasks. The happenings of this day gave hope to them that it—this unique combination of the motorcycle and the side-car—would be theirs before the coming of another summer.

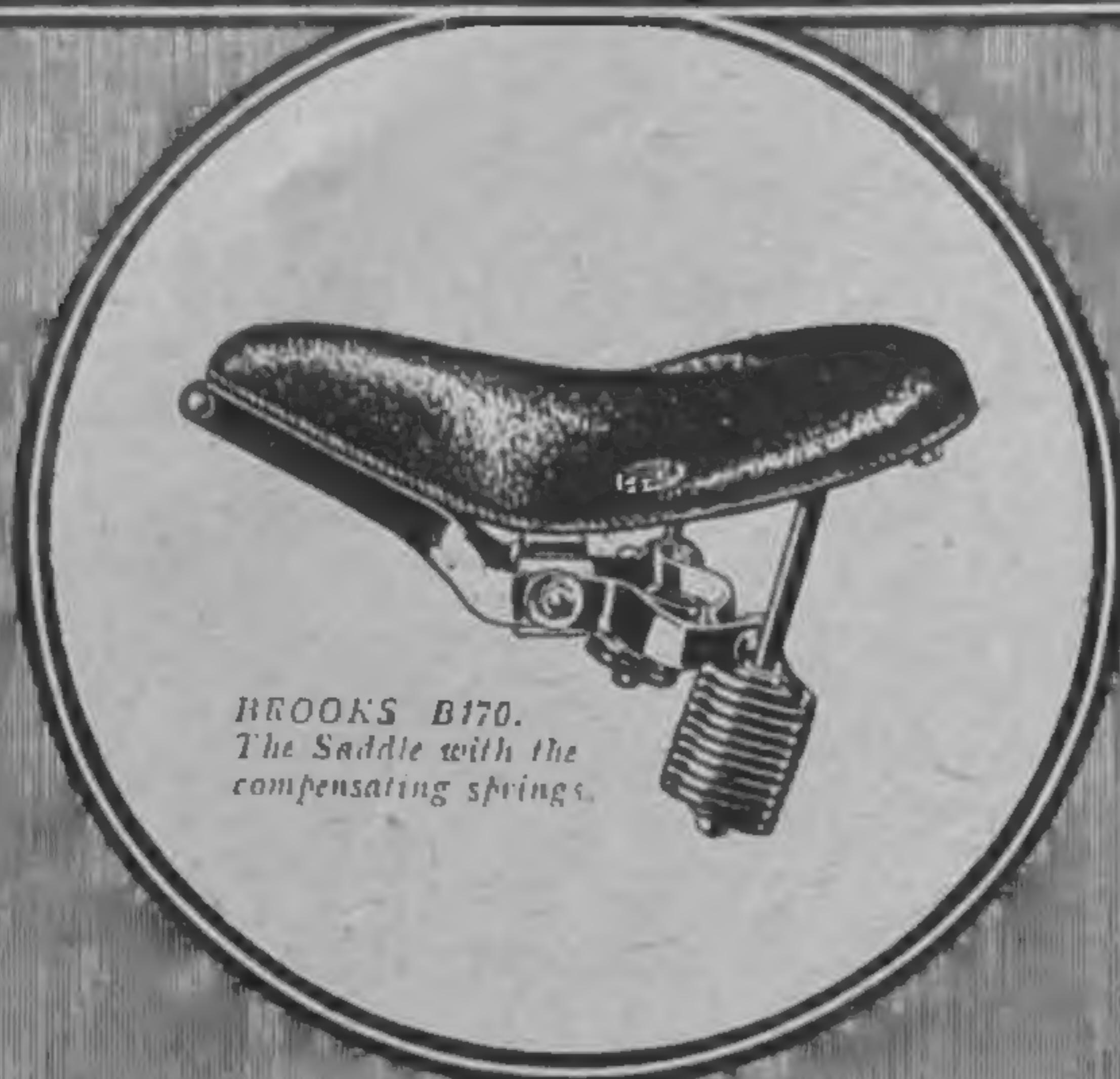
If you did not order a Clyno before this glorious day, the sooner you take action now the sooner you will get one.

Here's the Clyno Post-War Policy—
Mass Production of one Model (8 h.p.)
Competitive Prices of both Outfit and Spares.
And Strictly Rotational Deliveries.

THE CLYNO ENGINEERING CO.,
Clyno Works, WOLVERHAMPTON



FIT IT WITH A BROOKS



BROOKS B170.
The Saddle with the
compensating springs.

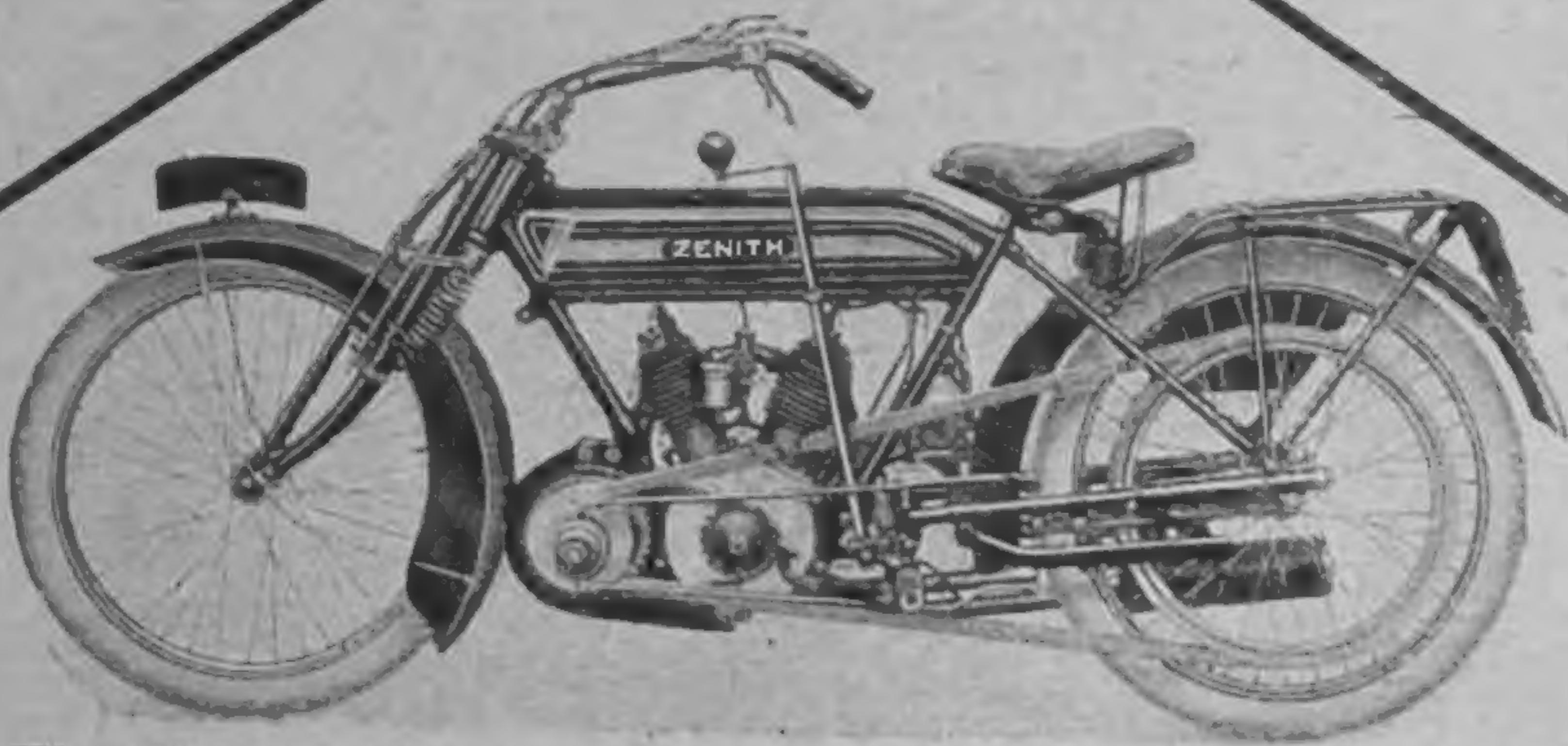
BECAUSE this saddle, famed for the service it has rendered, is made by a firm with a world-wide reputation for fine workmanship. Because only those materials of proved reliability are used in its construction. Because its springs have that compensating action which makes a "bounce" impossible.

Write for the Brooks Book.

J. B. Brooks & Co., Ltd.,
77, Criterion Works,
Birmingham.

1766

THE HALL-MARK
OF EFFICIENCY



The "Zenith" Clutch and Countershaft type, with Kick Starter, Positive Locking Clutch, longest Belt Drive, and the Infinitely Variable Gradua Gear.

Send for
our Catalogue,
and your name for
our Waiting List.

ZENITH

ZENITH MOTORS, LTD.,
HAMPTON COURT, ENGLAND.



VICTORY

in the Air.

In reviewing the great deeds of the Air Forces, do you realise how much of their success was due to

Sparkling Plug Dependence.

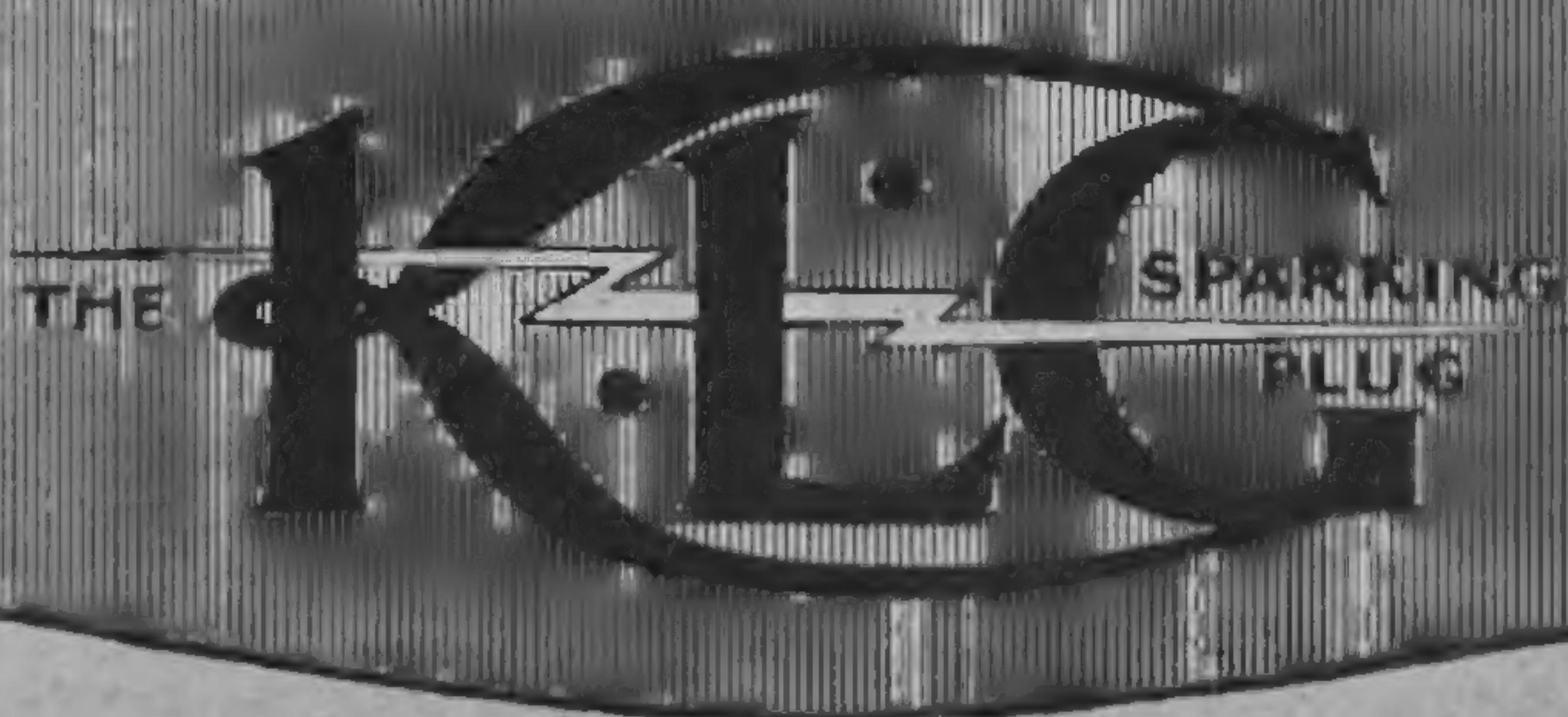
Failure over enemy country would have meant disaster, but our pilots were allowed to take no chances.

The AIR MINISTRY

knew the paramount importance of sparking plug efficiency, which is the precise reason why they reserved the entire War-time production of

K·L·G
SPARKING PLUGS

Sole Manufacturers :
The Robinhood Engineering Works, Ltd.,
Newlands, Putney Vale, London, S.W. 15.
Telephone : Putney 2132, 2133. Telegrams : "Kaelgee," Phone, London."





The Motorcycle of SUPERIOR QUALITY.

THE USE OF
THIS BADGE

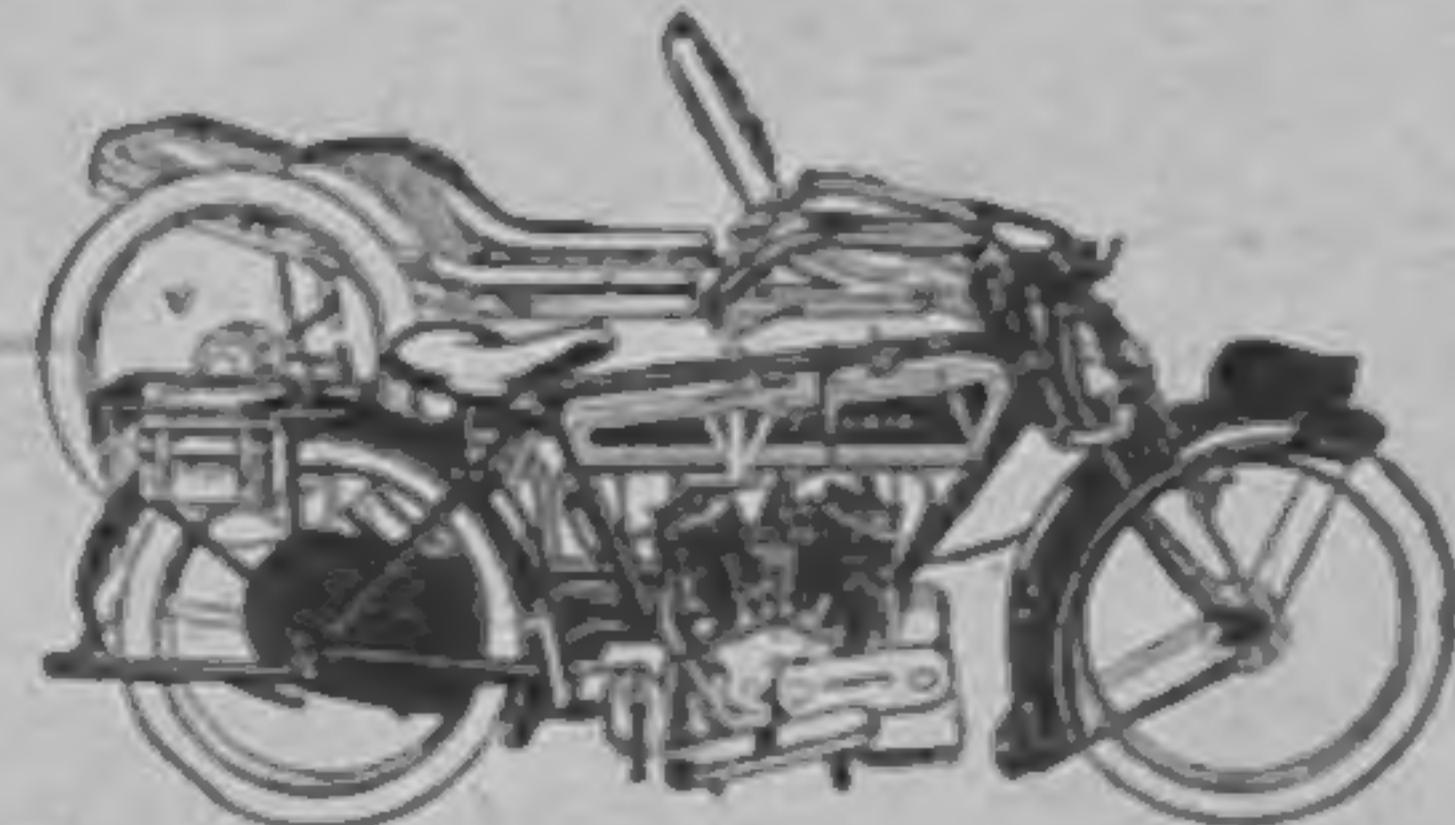


is an indication
that this Firm
has been accept-
ed as genuinely
British by a Tri-
bunal of Trade
Competitors

IF SUPERIOR QUALITY is the most influential factor in your choice of a motorcycle—if, as an ambitious rider, your aim to get ALL THAT IS BEST IN DESIGN, combined with sound British manufacture—then you must, after careful comparison, decide upon the "A.J.S." Note these of its many features:

Its original specification includes scientifically-built straight tube frame; Powerful, silent, and vibrationless A.J.S. engine; All-enclosed weatherproof chain transmission; Kick-starter with enclosed mechanism; Special three-speed countershaft gear; Patent gate change; Handlebar-controlled perfect multiple plate clutch; Forced lubrication direct to main bearings and big ends; Internal expanding rear drum brake; Patent spring forks; Interchangeable detachable wheels, etc.

Join the others on our "Waiting List."



A. J. STEVENS & Co. (1914), Ltd., CRAISELEY HOUSE, WOLVERHAMPTON.
London Agents: B. TAYLOR & Co., Ltd., Store Street, Tottenham Court Road.

ALLDAYS

BRITISH



MADE



HIGHEST



GRADE

THE POST-WAR "ALLON" TWO-STROKE MACHINE will incorporate all that is latest and best in motor bicycle manufacture, and will be recognised as pre-eminently the machine for RELIABILITY AND COMFORT.

ALLDAYS & ONIONS PNEUMATIC
MATCHLESS WORKS, BIRMINGHAM. ENGINEERING CO., LTD.,

And at 58, HOLBORN VIADUCT, LONDON, E.C.1.

Representative for Australia and New Zealand—
Mr. JAMES THORNELL, Box 882, G.P.O., Sydney, N.S.W.

APPLICATIONS INVITED FOR
POST-WAR AGENCIES.

"Blackburne"

THE IDEAL ENGINE

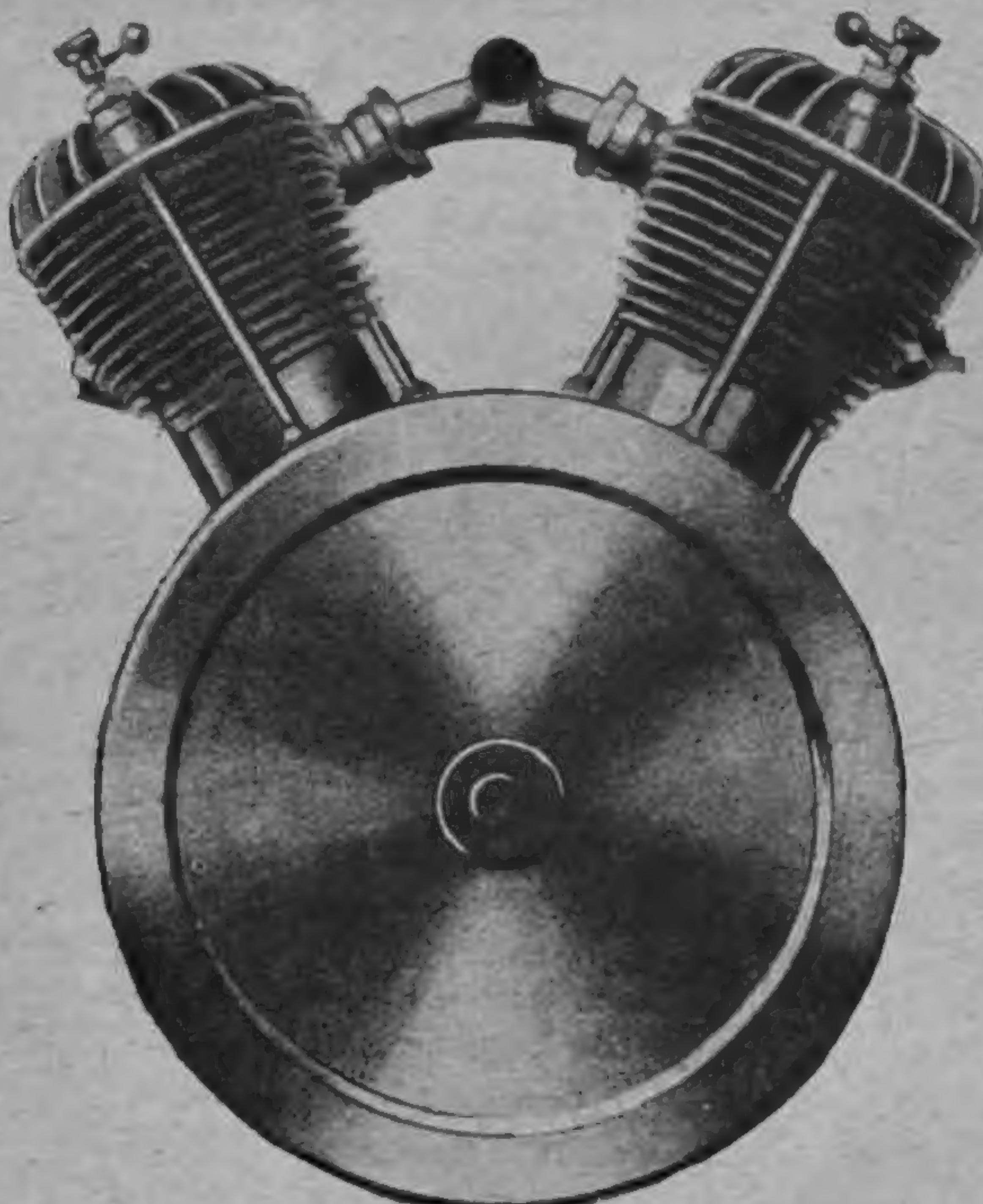
Fitted with Detachable Heads.

Valves easy of access — Cool cylinders ensured.
8 h.p. twin. 1,000 c.c.

After 15 years' experience this has proved the ideal type of engine, both for competition work and touring.

A FEW SUCCESSES—

May 1913	...	London-Edinburgh-London	GOLD MEDAL
Aug.	..	A.C.U. 6-Day Trials	GOLD MEDAL
Sept.	..	Sutton Coldfield Open Trial	GOLD MEDAL
Dec.	..	Loudon-Exeter-Loudon	GOLD & SILVER MEDALS
Feb. 1914	...	Colmore Cup Open Trials	GOLD & SILVER MEDALS
April	..	Loudon-Land's End-Loudon	THREE GOLD MEDALS
May	..	Loudon-Edinburgh-London	GOLD MEDALS



Burney and Blackburne, Ltd.,
TONGHAM, Surrey.

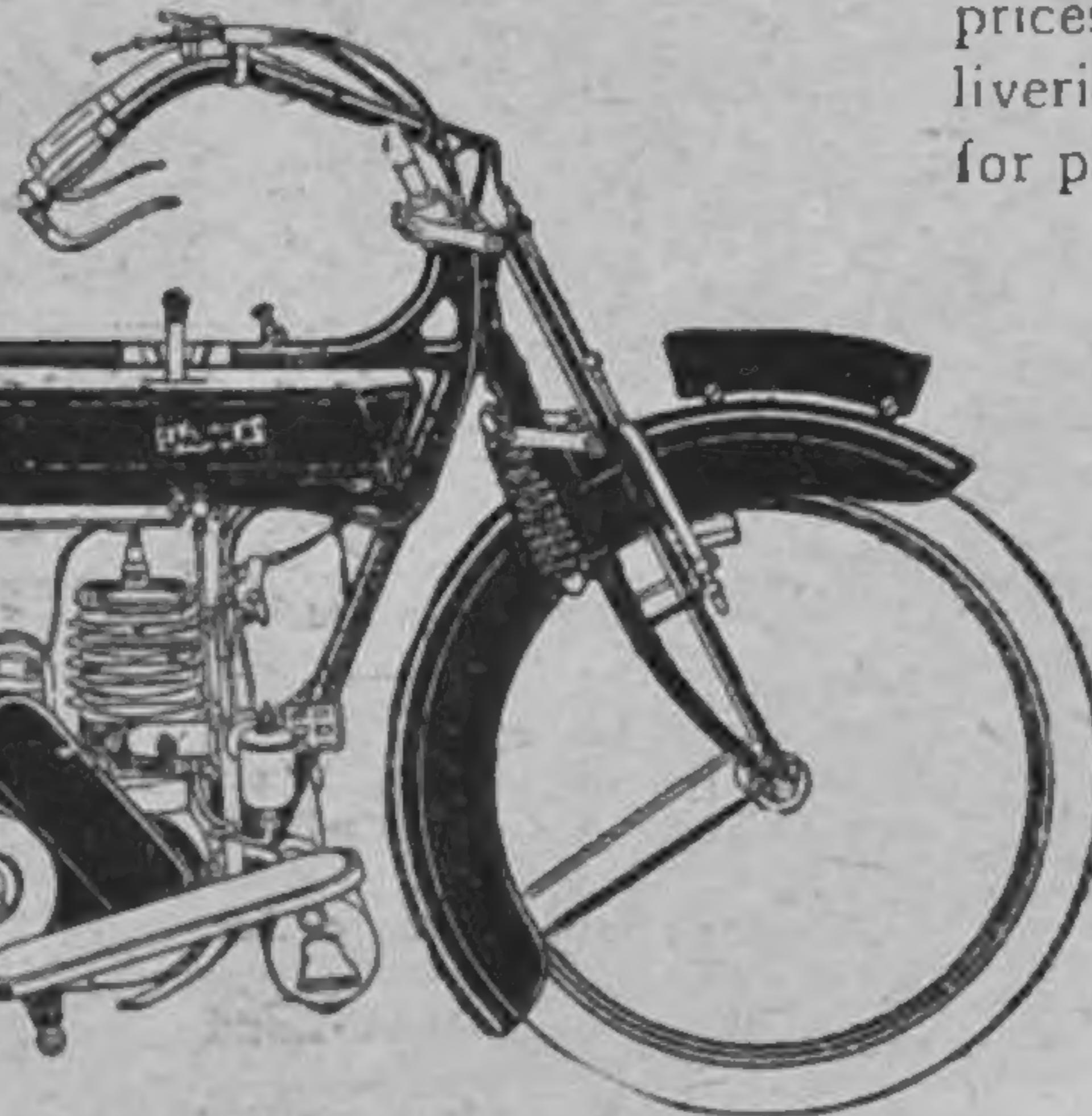
Telephone 287 Aldershot. Telegrams—"Blackburne, Tongham."

If you fancy a "LIGHTWEIGHT"
you should certainly order a

— and do so NOW to prevent disappointment, for supplies at present will necessarily be limited.

The JAMES lightweight illustrated is a smart, easily handled, economical two - stroke machine. Has flexible smooth-running engine, giving 4 to 40 m.p.h.

**JAMES Model 8 — A
Perfect High - Grade
Miniature Motorcycle**



For handy town, business, and pleasure purposes it is very useful. Full details and prices issued shortly. Deliveries in rotation. Enquire for particulars.

**The JAMES
Cycle Co., Ltd.
Greet, B'HAM.**

London Depot :
22, HOLB. VIA., E.C.1
B'ham Depot :
BROAD ST. CORNER.

R.H.S.



Looking back to pre-war days, every rider of pedal or motor-propelled bicycle, who knew those marks and the machines with which they were identified, will enthusiastically agree that they represent always the highest standard of efficiency and excellence in their sphere.

Looking forward, we can tell you that into every cycle or motorcycle which bears them will be built an invaluable war experience, making that excellence ever greater than of yore. See what your agent says — TO-DAY — or write us for details of our plans.

**Humphries & Dawes, Ltd.,
Hall Green Works, Birmingham.**

I ASK YOU TO READ THIS TESTIMONY.

COULD anything be more convincing. Mr. Edwards actually spends money to tell me how pleased he is, and Mr. Kendall spared his valuable time in writing me at length.

Mr. Fred Edwards, the well-known actor, after having a BINKS fitted to his Bradbury by Messrs. Chiltern, of Cambridge, wired me on reaching London this three-word testimonial:

"GOD BLESS BINKS,"

the most unique testimonial ever given.

Mr. Kendall's testimony is more deliberate, and really important to you.

C. Binks, Esq., Eccles.

Dear Sir,—About two years ago I built, for my own use, a motorcycle composed of Chater Lea frame, A.J.S. pattern, 3-speed gears and kick-starter, and a 1913 7-h.p. Rex engine, which had had very little wear. The engine had, when I bought it, a — carburettor which I tried on the machine when completed, and after tuning up, etc., only got 30 m.p.g. After that I was told to try a — variable jet, which I did, and only got 25 m.p.g. after trying all positions of jet opening. A friend of mine who had a garage (in which, by the way, I built my motorcycle) lent me an — and a —, both of which gave me 30 m.p.g., and through all this I had set my mind on a Binks Carburettor, but my friend of the garage did not like them, and yet he had not tried them; however, I sent my first — to Booth's, of Halifax, and got a Binks in exchange (so much to boot). I might say, in passing, I have a Gloria sidecar. Myself weighing 14 stone and wife 15 stone, and a heavy machine, and the engine would not run below 18 m.p.h. on any of the carburetters.

The first run on the Binks with self and wife and boy, 14 years, we did 70 miles, and we can now do (in summer) 108 m.p.g., and not only that, I have convinced my friend of the garage and others to such an extent that through my order about eight others have fitted BINKS, and are delighted with them, and I feel convinced that the Binks Carburettor is a mechanical job, and as a petrol saver it is the thing.

I have used all kinds of so-called spirit, and have not yet had a choked jet, but have taken out any amount of stuff from under the spring at bottom of filter.

The only improvement I can think of is a better washer on cap under jet orifice, and a grub screw to keep air slide from dropping off, which it has done with me about four times, and slightly less control covers and discs to same.

At the time of building the machine I was residing in Hull.

Yours truly, (Signed) W. H. KENDALL,
25, Crow Hill Avenue, Cleethorpes, Lincs.

ooooooooooooooo
Mr. O'Donovan's startling Record-breaking Performances on Brooklands were all accomplished by aid of a Binks

ooooooooooooooo
Send for my practical TREATISE ON CARBURATION free.

PRICE 49/- Plus 50% War Advance.

Also plus 1/6 for box, packing, and carriage, to comply with the new regulation. Complete with 6 spare jets, key, and full instructions.

ooooooooooooooo

C. BINKS,
LTD.,
Phœnix
Munition
Works,
ECCLES,
near Manchester.



SPHINX



Scenes the Sphinx has looked upon.

No. 8.

THE GREAT WAR.

From the mists of antiquity the Sphinx has stood, alone and apart, silent spectator of the world's might — until round that same head which Cleopatra saw against the sunset and before which Cambyses shook his furious spear, wheeled the battle-planes of the Royal Air Force.

And so, unmoved through every change of time and fortune, Sphinx plugs remain steadfast and invariable—British in emblem and in fact, an unchanging monument of English engineering skill.

THE
SPHINX MANUFACTURING
COMPANY,
BIRMINGHAM.

MARK C—25

For hot motor-
cycle engines &
heavy transport
work





Lieut. R. A. Jacquot is one of our heroes of the air. Forced to descend through mist while 100 miles from land, he and his observer spent three terrible days and nights on the upturned seaplane, but eventually a destroyer rescued them. Lieut. Jacquot is a Royal Enfield rider.

WE hope soon to don our "civilian clothes" and resume the supply of the Royal Enfield Motor Cycles in all models: The $2\frac{1}{4}$ h.p. Two-stroke Lightweight; the 3 h.p. Twin-cylinder; and the 6 h.p. and 8 h.p. Sidecar Combinations. We invite enquiries now for catalogue and particulars.

THE ENFIELD CYCLE CO., LTD., REDDITCH,
and 48, HOLBORN VIADUCT, LONDON, E.C.1.
Contractors to His Majesty's and the Allied Governments.

ROYAL
ENFIELD



THE UTILITY MOTORCYCLE.

Apart from its attraction as a pleasure and health-giver, the reliability of the modern motorcycle has proved that it possesses a distinct sphere of usefulness. Nevertheless, before this wide field can be developed it is obvious that a new type of machine must be evolved with simplicity as the keynote. A great problem is presented to the would-be manufacturer to decide with certainty the specification which will fill all requirements. Following are two articles : the first dealing with the subject from the makers' point of view, and the second from the users' perspective. The subject will be further analysed in subsequent issues, and it is hoped eventually to outline the essentials of a motorcycle which truly can be described as an all-purpose mount.

I.—THE MANUFACTURERS' PROBLEM.

Questions Which Must be Answered Before the Utility Motorcycle Can be Produced.

WHEN the bicycle trade first started it was a luxury trade. People bought bicycles for pleasure or sport, and not because they were essential to their everyday life. The bicycle manufacturers consequently turned out their products as luxury articles, charging anything over £20 for an ordinary roadster machine, and the average purchaser was quite satisfied to pay such a price because he realized that he must pay fairly heavily for his pleasures. As the bicycle was gradually improved, however, and became more reliable, more efficient, and more comfortable, the number of riders increased tremendously, until, in the middle 'nineties of last century, cycling became the most popular of all pastimes, and the trade enjoyed a tremendous boom.

Prices kept high, firm after firm entered the trade, and as the boom gradually, almost imperceptibly, slackened, competition grew keen and designers cast about for new ideas to tempt the buying public. One famous Coventry firm, however, saw that the bicycle was becoming so reliable and so useful that it was likely to become an integral part of the life of the nation—to become an everyday household article, used for everyday business purposes, rather than an article of luxury, used only for pleasure or sport. Therefore they set out to capture this embryo demand for a utility bicycle by providing a sound machine at a reasonable cost—and they succeeded. They succeeded so tremendously, in fact, that all the other firms were compelled to follow their lead as best they

could, many getting into low water in the process, and others collapsing altogether, while the concern which had pioneered the movement made big dividends and placed themselves in a commanding position in the industry.

In the car industry, too, Henry Ford realized that there was a large utility market for a car, and in 1910 he produced a vehicle which suited the requirements of the market, and sold it at a price which made the utility car a profitable investment to the purchaser. That Ford's perspicacity has been rewarded is well known to all ; so highly has he been rewarded that he is entirely free from competition, and the Ford seems likely to remain indefinitely the one and only car for the utility market. His success, be it noted, arose from the fact that he was the first man to produce the right type of car at the right price.

So far, no motorcycle manufacturer seems to have realized that there is a market for a utility motorcycle. The trade is still supplying machines designed for, and at a price suitable for, a luxury or pleasure market only. True there are many people even now who use machines for utility purposes, just as there were people who used cars for business purposes before the Ford came along, and just as there were people who used the £20 bicycles for everyday use. But the vast mass of people who will in the future use motorcycles for utility purposes have not yet been offered the right machine at the right price.

Let us suppose that a manufacturer has realized that a huge potential demand does exist for a utility machine ; then, before he can get to work to supply that demand effectively he has to answer three questions : What is the right time ? What is the right type

The Utility Motorcycle (contd.).

of machine? What is the right price which will make the purchase of such a machine a good investment for the potential utility user?

Now there is no doubt whatever as to the correct answer to the first of these three questions. The earliest possible moment is the right time, for the extensive use of the motorcycle in the war has proved to the general public that the motorcycle is a reasonably reliable machine with a distinct sphere of usefulness. The manufacturer is thus convinced that he must get to work right away, but, first, he must answer the other two questions. Unfortunately, the answers to these questions are not at all clear. For instance, must it be a lightweight solo machine, or must it be capable of taking a passenger or goods in a sidecar? Must it be sold at £25, or at £40, or £50? Until these questions are satisfactorily answered, he cannot start on his designs, and should he answer the

questions incorrectly he may be faced with total failure.

It seems that only through the motor-cycling Press can these questions be properly answered. We must get to know what motorists think; we must find out the views of those who use the present luxury machines for utility purposes. They alone can tell us what type of machine is required, and what selling price would make such a machine a financially profitable investment. MOTOR CYCLING is read by motorists all over the world, and it is with the hope that they will be stimulated into expressing their views that these remarks have been made.

Remember, if we can give the wide-awake manufacturers an idea of the type of machine required, and the price at which it must be sold, we shall hasten the day when motorcycles will be cheap and plentiful, when they will be as satisfactory in use as the now ubiquitous bicycle, and as sound an investment as is a Ford car to the small business man of to-day.

II.—From the Users' Standpoint.

IN every business nowadays there is a need and a place for the motorcycle, because it is the next step forward from the useful, ubiquitous pedal-propelled bicycle. The motorcycle cannot and will not serve completely as a car substitute: its place is between the car and the bicycle. Journeys and purposes just above the reach of the bicycle and hardly within the car's scope are its province: a fair and large country for our makers to win.

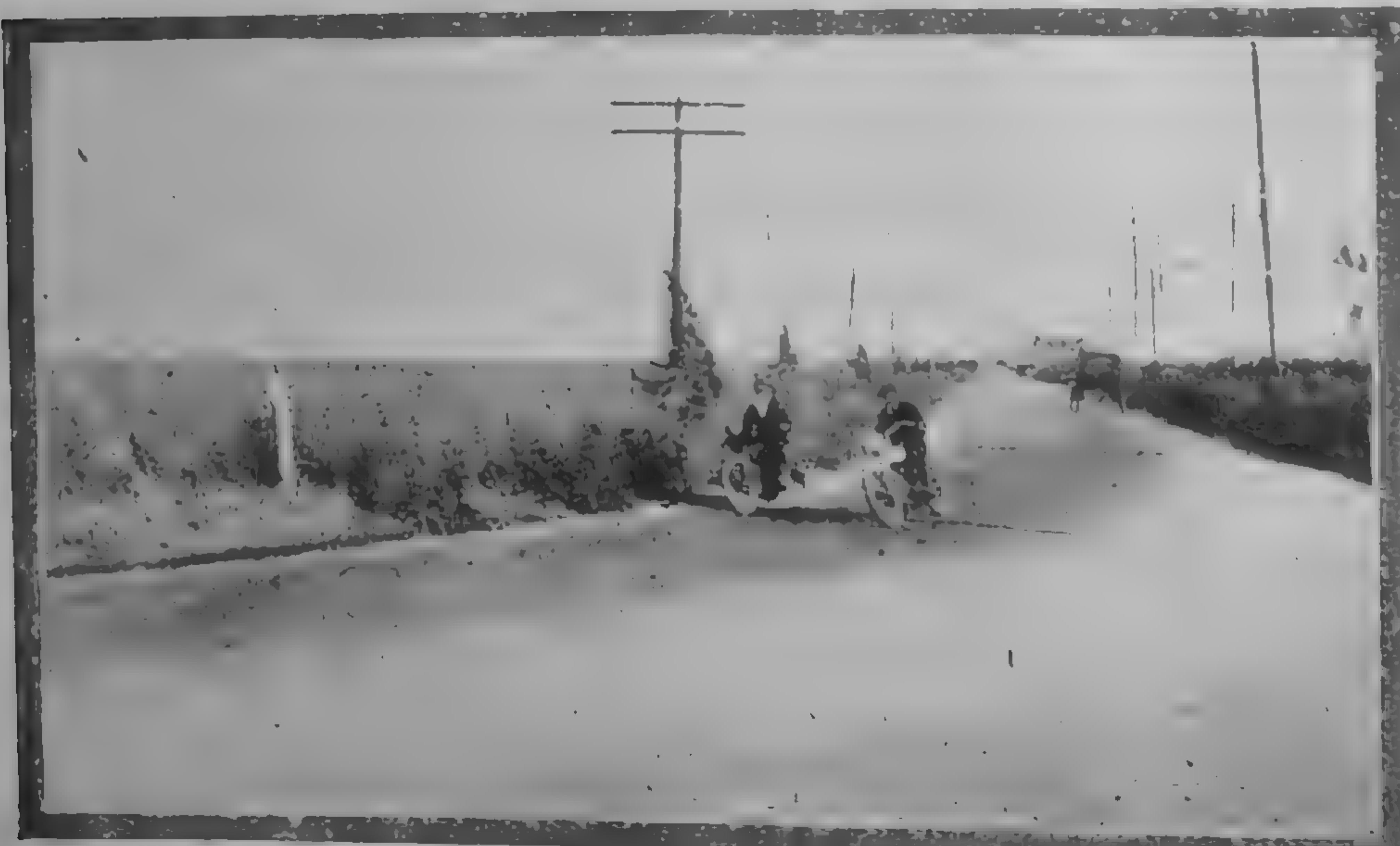
Most workers with tools have three or four of the same kind, but of different sizes: screwdrivers, for example. They will say that the middle sizes are as indispensable to them as the extreme sizes are. In a nutshell, that is the case for the motorcycle in business. No one aware of the trend of modern transport and taking the broad and long view can otherwise regard it, and to put it so has nothing of the visionary about it. It is merely speaking of to-day in the terms of to-morrow—a useful and a necessary thing at the present time.

That is the case of to-morrow. How do we stand to-day? How far are we on the road to to-morrow?

Taking rough guess figures of future conditions, do we see a motorcycle for every ten bicycles and four motorcycles for every car among our business community? And, if not, why not?

It is, of course, quite a big question. No one will deny that—least of all those who have considered it most. It is a question where readers of MOTOR CYCLING could be of the utmost use by giving their views and gauging non-technical public opinion. A consensus of motorcycle opinion would help us all—users, readers, trade and public—to a satisfactory answer, and the terms and tenor of that answer will enormously re-affect upon the pleasure motorcycle trade and buying world. Are the requirements of the modern business user, the non-technical, non-mechanical user completely met by any one maker or group of makers, as regards price, finish, equipment, power, accommodation, and so forth? If not, in what respects can they or should they be amended?

These are the kind of questions we motorcycle users must ask ourselves, each other, and—last and most important—the modern business man himself.



The conditions of American roads have been given serious attention of late, and surfaces such as are shown here are now not uncommon in the neighbourhood of large towns.

THE FLOWING TIDE OF PELMANISM.

10,000 ENROLMENTS IN A MONTH!

"PEACE, PELMANISM, AND PROSPERITY."

PTHE coming of Peace has given a tremendous impetus to the Pelman movement.

Within a single month ten thousand men and women have enrolled for a Pelman Course!

"Peace, Pelmannism, and Prosperity" is, in effect, the national watchword of the day. Thousands who have hitherto been prevented from taking it up, are now hastening to begin their study of Pelmanism, which, during the strenuous war years, has proved of such enormous help to business and professional success.

Many big firms are enrolling their employees *en masse*; one famous business house has just enrolled 165 members of its staff.

Every enrolment is made with a definite aim. To gain a bigger salary or a better position; to increase efficiency, to economise time and work; to develop more ability; to broaden experience and to make learning easy—whatever the object may be, Pelmanism never fails to prove its value. There is no man or woman, in fact, who has conscientiously studied "the little grey books" without deriving benefit: the most popular phase being exemplified by the hundreds who have reported 100 per cent., 200 per cent., and even 300 per cent. increases of salary as a direct consequence of Pelmanising.

The evidence for Pelmanism is freely open to everyone to examine, and will be sent to any reader who applies to-day to the address given below.

SALARY DOUBLED in 3 MONTHS!

REMARKABLE LETTERS.

There is only one way of judging Pelmanism, and that is by results. In the records of the Institute there are many thousands of letters reporting the most remarkable "benefits" ever recorded: benefits so substantial and so direct that they speak more plainly than volumes of argument could do. A few extracts are given hereunder from some of these letters.

From Bristol a Pelmanist writes:—

"After taking up Pelmanism for about three months I was offered a very high post in the firm in which I am employed. This advancement, which doubled my salary (which was not inconsiderable before), I attribute entirely to Pelmanism."

Here is another letter from a journalist, who had only got as far as Lesson 4 when he wrote:—

"Already I feel a definite change in my mentality, a stirring and stretching in the mind. I cannot praise too highly the perfectly natural method of progression. There is no trick or quackery about it, and for the return your System gives it seems to be nonsensically cheap at the fees you charge."

WORTH A HUNDRED TIMES THE PRICE.

Many business men have remarked that the Course, to them, would be cheap at ten, twenty, or one hundred times the price. One man, a solicitor, said that a single lesson of the Course was worth £100. The cost, in short, is infinitesimal as compared with results, and small though the fee is, it may be paid by instalments if desired. Cost is no obstacle to anyone becoming a Pelmanist.

Large numbers of medical men have taken the Pelman Course, and many of them recommend their

patients and friends to do the same. Here is a letter from one:—

"I cannot be sufficiently thankful that I took a Pelman Course. . . . I attribute my success in a large measure to the application of Pelman principles. The study was done in the spare time left to me by a large industrial practice."

"RESULTS ARE WONDERFUL."

Another Pelmanist expresses himself thus:—

"The results are wonderful. I used to wonder (before taking up the Pelman Course) if there was any possible exaggeration, but honestly *no pen can express one tithe of the value the Course really is*. What I have gained up to the present could never be called costly even if it had cost me £50."

It may be remarked that this gentleman had only worked through 2 lessons when he wrote the foregoing. Comment would be superfluous.

The following extract from a Pelmanist's letter has previously been published, but will bear repetition. In the course of a very warm tribute to the system he said:—

"I used to think the claims made for Pelmanism were fantastic and impossible; now I consider them to be under-statements of the truth."

OPINIONS OF FAMOUS MEN.

In the course of the last few months a number of well-known professional and business men and women have carefully inquired into Pelmanism, have investigated the methods employed, and have verified by close scrutiny every statement made and every testimonial published. Their verdict has in every case been another triumph for the Pelman Institute. These include:—

Admiral Lord Beresford.

Lieut.-Gen. Sir R. S. S. Baden

Powell.

Sir Arthur Quiller Couch

Sir H. Rider Haggard.

Sir Wm. Robertson Nicoll.

Sir Theodore Cook.

Sir Harry Johnston.

Mr. Geo. R. Sims.

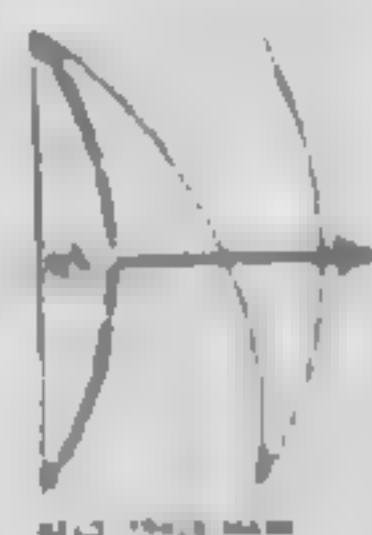
Mr. Max Pemberton.

There is no parallel to the amazing success of Pelmanism, amongst all classes; and every month, every week, its success and popularity increase.

It is perfectly simple and easy to master, takes but very little time, and can be studied anywhere. Being taught entirely by correspondence, it does not matter where you live. Many successful Pelmanists took up the Course when living overseas in remote corners of the Empire.

It has now been adopted by over 400,000 men and women, and no thorough student of the Course has ever yet failed to secure "results."

Full particulars of the Pelman Course are given in "Mind and Memory," which also contains a complete descriptive Synopsis of the 12 lessons. A copy of this interesting booklet, together with a full reprint of "Truth's" famous Report on the work of the Pelman Institute, and particulars showing how you can secure the complete Course for one third less than the usual fee, may be obtained, gratis and post free, by any reader of "Motor Cycling" who applies to The Pelman Institute, 200, Pelman House, Bloomsbury Street, London, W.C.I.



BOWDEN WIRE MECHANISM

DURING the past four years nearly every War Department found some use for Bowden Wire, many millions of feet of which, together with the necessary operating parts, were consumed each year by the Allied Forces.

To meet the latest demands, we opened and equipped a factory in the United States.

We are now able to resume the manufacture of our pre war products. The great extension of premises, plant, and machinery, effected during the war, makes it possible for us now to deal promptly with all orders.

We invite enquiries. We also wish to express regret to many customers whose orders we have been compelled, by war requirements, to reject. It will be recognised that the position we were placed in made disappointment unavoidable.

Established 1897.

ORIGINAL MANUFACTURERS & PATENTEES

**Bowden
Wire Ltd.**
LONDON
WILLESDEN JUNCTION
N.W.10

Future Sporting Events



Novel Suggestions to Increase Their Interest and Produce Fairer Results.

BY MAJOR SYDNEY R. AXFORD, R.A.F.

THE most interesting and critical period in the history of motor cycling has now arrived. On the course taken by those who have the trade and pastime in their hands depends, to a very large extent, the prosperity of the industry on the one hand and the freedom from "official tyranny" on the other.

Manufacturers should lose no opportunity of obtaining their share of raw material, and although, no doubt, it would seem obvious that any firm would naturally make every endeavour to obtain the material that is vitally necessary to carry on its business, yet in these days it would seem that individual effort is like a voice crying in the wilderness. Therefore, united action of all manufacturers, great and small, would appear to be necessary if their interests are not to suffer. There are organizations for the protection of the manufacturers and traders, and I should be glad to see real concerted action taken.

The point of immediate interest to the motocyclist, however, is what the A.C.U. intends to do to "boost" motor cycling. In my opinion, this organization has a wonderful opportunity of helping the pastime in no uncertain manner; this opportunity, if lost now, may never occur again, and it is my purpose in this article to offer a few suggestions for what they are worth.

Away With the Fuel Restrictions.

In the first place, if fuel is restricted, we have an enormous handicap at the outset. Here is a chance for the A.C.U., in concert with the A.A. and R.A.C., to work "hammer and tongs" for the immediate release of benzole and all petrol substitutes, as there is now no apparent need for these fuels for the purpose of munitions. There is no need to labour the point that strong concerted action alone can be successful.

The next care is to foster in every conceivable manner interest in the motor-cycling movement. There are many ways of doing this, in my opinion.

Dealing with competitions, the first thought is inevitably the T.T., on which there is little occasion to dwell, as it is a wonderfully successful competition, usually well organized and supported. The event second in importance to the T.T. is the Six Days Trial. I have a few suggestions I would like to offer about this, and these are as follow:

Why not simply state vaguely that this trial will be held in Scotland, Wales, or wherever the locality may be, and keep all the conditions of the trial secret? Merely state that standard touring models only may compete. The object is obvious, i.e., it would prevent manufacturers putting freak machines in this competition, as they would not know what to work at, and they would fear disqualification if they departed from their standard models in any way. The possible objection that might be raised by them, that their machines were the following year's models, should not be allowed, as the man in the street wants current information—he does not wish to grasp at shadows.

Unique Conditions.

The lines such a secret trial might be run on are:—

- (1) Speed and hill-climb trials at commencement.
- (2) Quietness, cleanliness and general appearance.
- (3) Ease of starting on the fifth day—machines, of course to be garaged the previous night under official observation.
- (4) Petrol and oil economy. Each competitor would be supplied with official tickets, which would be surrendered en route for petrol, etc. The A.C.U. would, of course, have to arrange with all suppliers on the course, but this could be managed, I think.
- (5) Inspection for play in steering, wheels, etc., at the finish of the trial.
- (6) Speed and hill-climbing trials on the sixth day for comparison with results on the first day. By this means the falling-off in efficiency of each machine could be easily noted, as, in the case of the first speed trial, competitors would not know that they would have to compete against their own

Future Sporting Events (contd.).

results at the conclusion of the trial, and would naturally, therefore, get the best they could out of their machines.

In addition, the A.C.U. officials would have to travel over the route during the trial, noting any competitor who might be carrying out furtive adjustments en route. It might be well, too, to rule that no spares may be purchased during the trial. Everything needed would have to be carried from the commencement. The quantity of spares thus carried would be an excellent indication of the confidence, or otherwise, of the manufacturer in his machine.

There are, of course, many other directions in which suggestions could be made ; but if the A.C.U. decide to work on this suggestion—it would be foolish to attempt to outline all possible tests—it would defeat the very object I am putting forward.

Opportunities for Local Clubs.

Local clubs should also do their bit to assist the movement, and in this direction I would suggest that they should organize outings and competitions at which awards would be made, in the case of solo and sidecar machines intended for pleasure, for appearance, quiet and smooth running, cleanliness, accessi-

bility, etc. Utility machines should be encouraged by awards for efficient adaptation of outfits for commercial needs, the use of heavy fuels, gas, etc. Manufacturers might show their confidence in their machines by entering them for a seven days non-engine-stop test on Brooklands, the average speed not to be less than 20 miles per hour.

So one could go on ; the field for novelties in competition is limitless. I think it should be of interest, and would show the A.C.U. and manufacturers in no uncertain manner what was expected of them if readers would put their views forward through the columns of MOTOR CYCLING. I do not doubt that the Editor would welcome such views and be happy to publish them.

Interest the Daily Newspapers.

Finally, why not utilize the daily Press? Papers like the "Daily Mirror" would, I feel certain, be only too glad to publish photographs, with a short description, of any interesting event, such as a Gipsy Club meeting, or a competition held by a local club for utility machines, etc. This is practically an untouched field so far. It would be splendid if we could get the daily Press as interested in the pastime as it is, for instance, in horse racing, and I think it could be done.

MORE DETAILS OF NEW MACHINES.

First News of the Metro-Tyler.

ONE of the most satisfactory two-stroke engines marketed in pre-war days was that built by the Metro Manufacturing and Engineering Co., of 15, Frances Street, Ashton, Birmingham. We are now advised that the Tyler Apparatus Co., Ltd., of Banister Road, Kilburn Lane, London, N.W., has entered into a working agreement with the Metro Co. by means of which both concerns will market a motorcycle built to the same specification, and to be known as the Metro-Tyler. From the advance specification we see that the Metro engine to be incorporated will be 70 mm. by 70 mm. bore and stroke, fitted with a one-piece crankshaft which will run in white metal bearings. The frame, which gives a low riding position, incorporates Brampton bisflex forks. The carburettor is an A.M.A.C., and the magneto an E.I.C. The lubrication is by a Best and Lloyd sight feed to specially constructed oil ducts. A Lycett saddle will be fitted. The tyres used are Palmer studded, 26 ins. by 2 ins. on the front wheel and 36 ins. by 2½ ins. on the rear. Although footrests are shown in the accompanying illustration neat aluminium footboards will be obtainable at slight extra cost.

A choice of handlebars is offered. Well-made armoured pannier bags, fitted with lock and key, are fitted, and accommodate a very full set of tools. The standard gear is 5½ to 1. The machine can be obtained with disc wheels if desired, which give it a very sporting appearance.

The finish of the machine is a striking feature. All enamelled and plated parts are first given a special rust-proofing coat, after which the frame, wheels, mudguard and tank are enamelled in a very attractive shade of red. The tank is further finished off with broad, black lining which gives a very pleasing appearance.

Although the actual retail price has not been fixed at the moment, it is anticipated that this machine can be marketed complete with countershaft two-speed gear for £40, at which figure it should find a ready sale. Messrs. Tyler Apparatus Co., Ltd., advise us that they are not neglecting the interest of lady riders, and hope to have a very smart ladies' lightweight available at an early date. Deliveries of the gentlemen's model will commence about the end of January.

TRIUMPH AND DOUGLAS.

READERS will have noticed that no mention of these prominent concerns has been made in the announcements of advance programmes which have already been published. We have reason to believe that in the case of the Douglas company the publication of details of the new models is only a matter of a week or two, but the intentions of the Triumph company have not as yet been made public.

BLACKBURNE.

IT had been hoped to give details of the Blackburne programme in this issue, but we are advised that they are not sufficiently far advanced at the moment to make publicity advisable. At the same time matters are being rapidly pushed on, and from information already in our possession we can assure readers that the models will be very interesting and well worth waiting for. Meanwhile, the concern asks the indulgence of their numerous inquirers.



The Metro-Tyler two-stroke.



THE FOX and THE GRAPES.

IF you can't ride a motor bike, you'll say it's like talking grapes to a fox who can't reach them to mention the merits of Dunlop tyres to you now!

True; but if that fox had known that he could get those grapes by waiting he wouldn't have dismissed them so slightingly!

So your interest in the tyre-equipment of the motor cycle you have now or mean to get is important and the merits of Dunlop tyres are best sung by the men who have used them.

Here's a "song":

"47, High Street, Bedford.

"The admirable service which my Dunlop Extra Heavy Motor Cycle Cover, which has been used for the past 2½ years, has given me, calls, I think, for some comment from me. Fitted to a 3½ H.P. Rover in August, 1914, this tyre has done 18,258 miles. I have used it in all weathers, on all kinds of roads, and as you will see it is really still of service.

L. C. FLUSOME."

The cover is on exhibition at the offices of the Dunlop Rubber Co., Ltd., Aston Cross, Birmingham.



Are **YOU** employing
a disabled man?

RELEASE OF PETROL.

TO the man of discrimination there is only ONE INSURANCE POLICY possible

THE POOL COMPREHENSIVE MOTOR POLICY

While you have been dreaming of the joys of the open road we have been thinking for you, and now offer the Perfect Cover.

Widest Protection — Generous Provision — Moderate Premium and Profit Sharing.

Each year's renewal is reduced by a share in the profits of the pool — Consider this, and you can see that Pooling Insurance means actual COST PRICE INSURANCE always.

THE
LICENSES & GENERAL INSURANCE
COMPANY, LIMITED,
24. Moorgate Street, London, E.C. 2.

SIMPLICITY IN CONTROL.

How it Can be Easily and Neatly Obtained.

TO all enthusiastic and thoughtful motocyclists improvements in the control must be the most urgent of post-war improvements. These may be arguments about singles versus twins, or whether a small "Four" is really the engine of the future, but there can be no argument as to whether the controls are to be revised and simplified. "Tap-twidd-

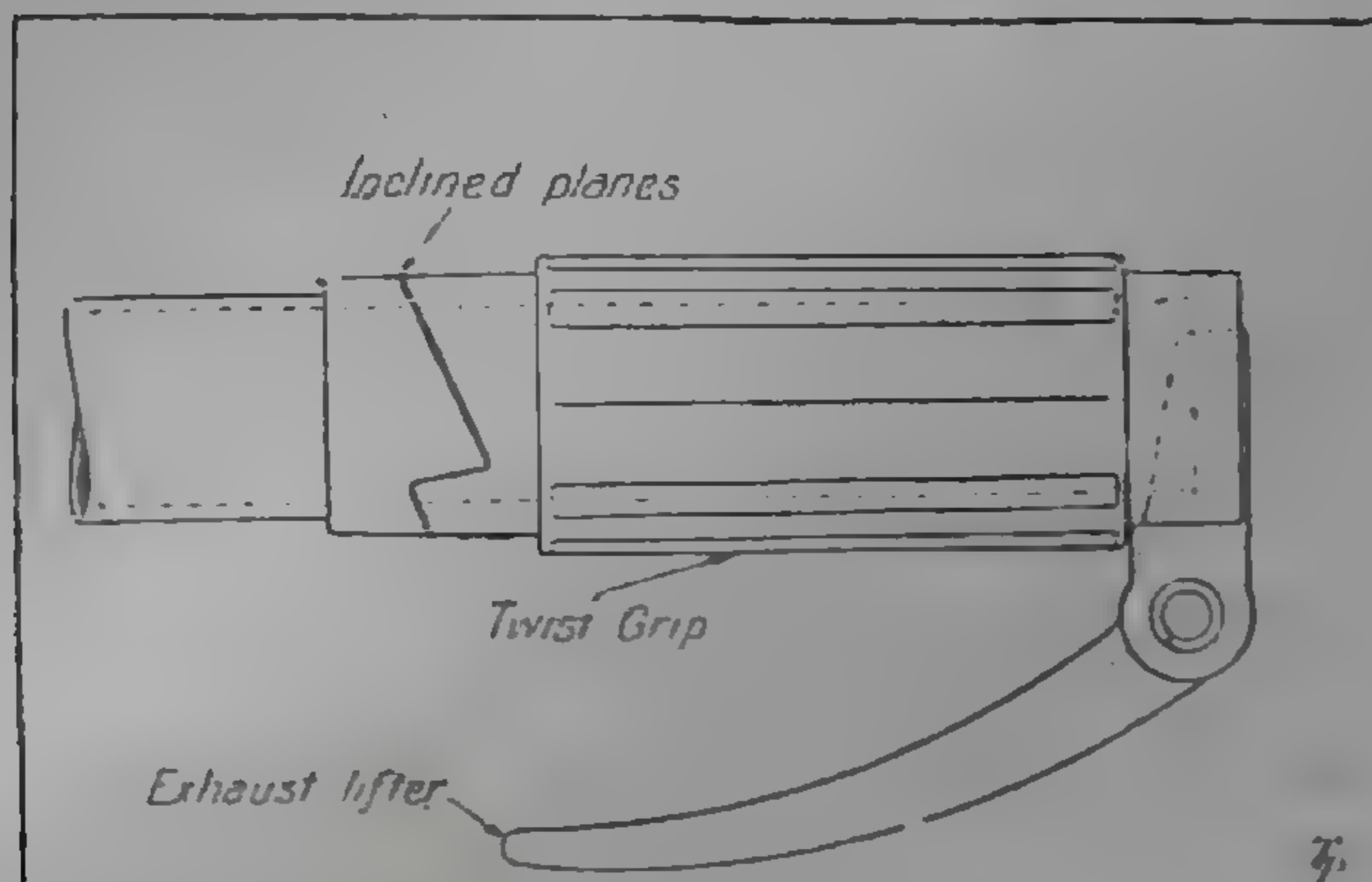


Fig. 1—Exhaust lift and front brake inter-connected.

"dling" may be the height of bliss to a cranky few, but to the great majority the six or eight controls are only a downright worry.

Long ago, when speed gears and handlebar-controlled clutches were still in the making, our handlebars were not overburdened with levers, for we had usually the front brake and the two carburetter levers on our right hand, and the exhaust valve lifter on our left. Then came handlebar control for the spark, and, of course, this went to the left. The hand-controlled clutch followed, and with it came the question of where to place it. It has been put in various places, but now it usually finds a resting place next to the front brake lever, on the right. This only adds to the complication, and until now no decided

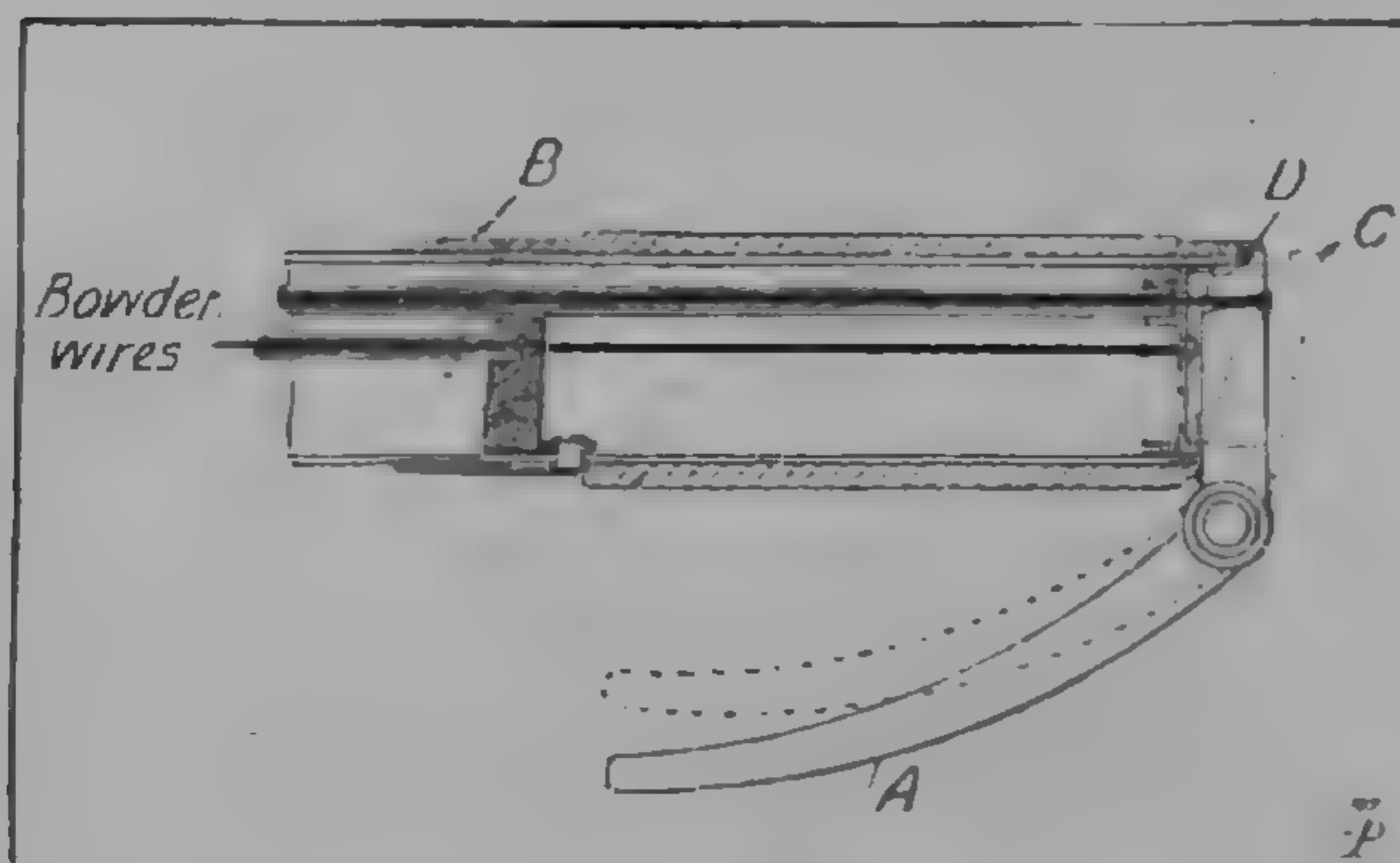


Fig. 2. Twist grip for clutch and gear changing.

effort has been made by manufacturers to tackle the whole question afresh and re-design the whole control system.

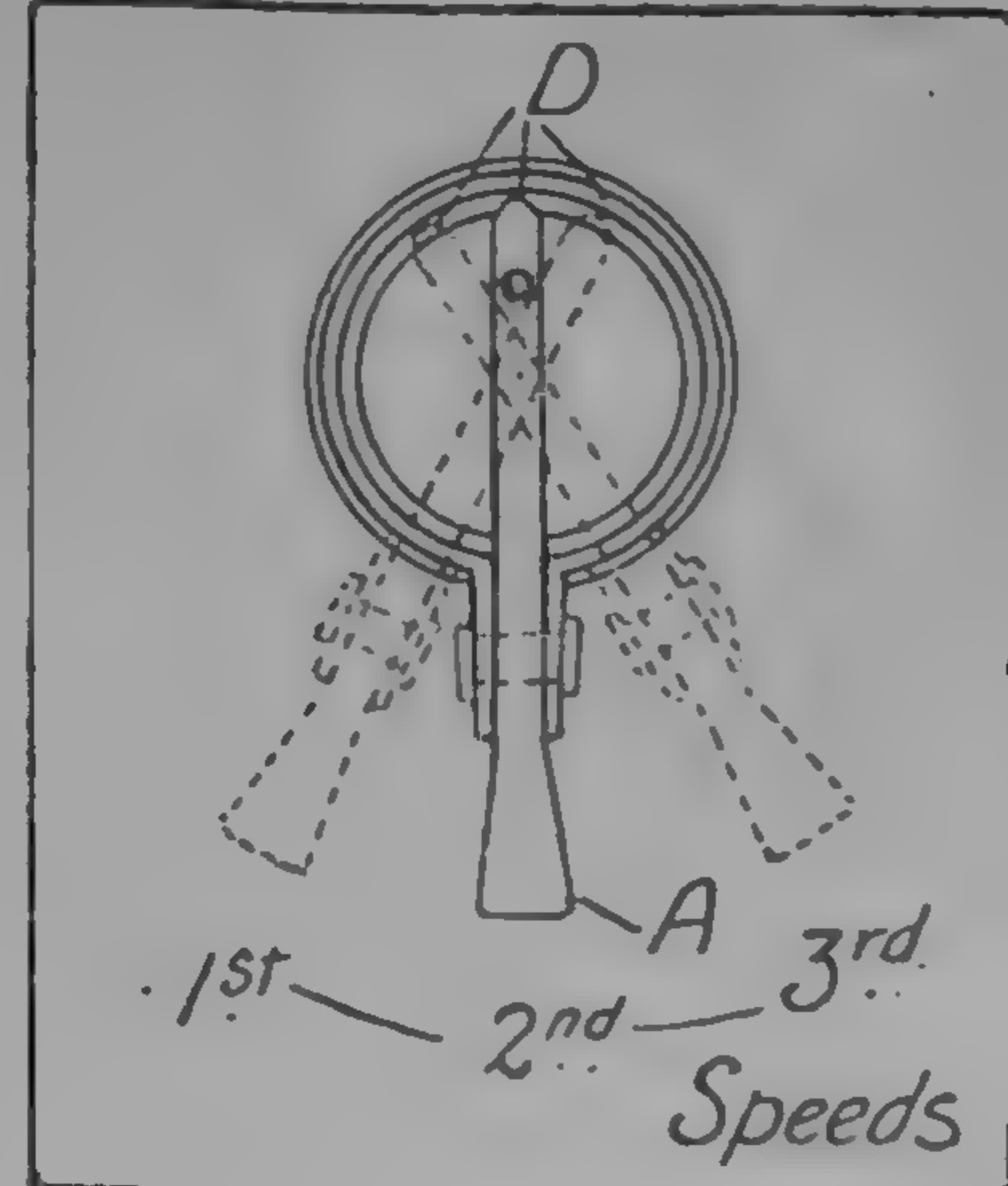
That it is a very complex problem anyone who has closely studied it will readily admit, for it differs in many ways from ordinary car practice. To begin with, in a car you have always your two feet free and

able to operate the pedals; but in a solo mount one leg is necessary to act as an occasional prop when amongst traffic, and it is no use having pedals if you cannot operate them in a tight corner.

A great number of motocyclists have partially solved the problem by casting aside or rendering useless the front wheel brake and fixing Bowden control to the clutch instead. This is the way the writer's machine is equipped at present: nevertheless, it is not recommended, as it is "agin the law," and if one is in a hilly district one is apt to wish for a front brake.

Having two brakes on the rear wheel, actuated by one foot pedal, does not seem a good solution, and the use of the foot, in changing speed, may be all right in the case of a two-speed gear, but when it comes to three or four speeds, something more delicate is required. It is always dangerous to prophesy, but it is more than likely that during the next two years the spark advance lever will be abolished in favour of some automatic spark advancing arrangement and the single-lever carburetter will come into its own. Thus we will have two less levers to worry

Fig. 3.
End view of
grip shown in
Fig. 2,
illustrating the
gear-locking
device.



over. This leaves us with the three "major" levers, i.e., the exhaust lifter, the front brake, and the hand-controlled clutch, all of which require considerable strength to operate. No matter how you look on this part of the problem, you seem to be compelled to inter-connect two of these levers, and the question is—which are the two to be joined together? All their functions are entirely different, and there must be separate control to each of them.

Personally, the writer considers the solution of the problem lies with a combined twist grip and inverted lever, as shown in Fig. 1. In this sketch the exhaust valve lifter is in its usual place, and by twisting the grip round the inclined planes force the whole grip, plus the exhaust lifter, to the right, which motion actuates the front brake. The inclined planes give immense power to operate the brake, and at the same time the hand is not tired when holding the brake on, as the inclined planes resist the pull to a great extent. If thought preferable, the conditions can be reversed, i.e., the lever can actuate the brakes and the planes the exhaust valve. The main point is that with one hand you have the two different operations under constant control and independent of each other.

Simplicity in Control (contd.).

Thus is obtained the control for the exhaust and the front brake, and if we can consider those as satisfactorily settled, then we can get on with the controls for the clutch and the change-speed gear. It is suggested to have a similar arrangement to Fig. 1 on the right-hand end of the handlebar and to make the right twist grip operate the three speeds and an inverted lever the clutch. Fig. 2 shows a sectional side view of the design, and Fig. 3 an end view with the grip in the three-gear position. Speeds 1 and 3 are shown in dotted outline. It will be seen that the

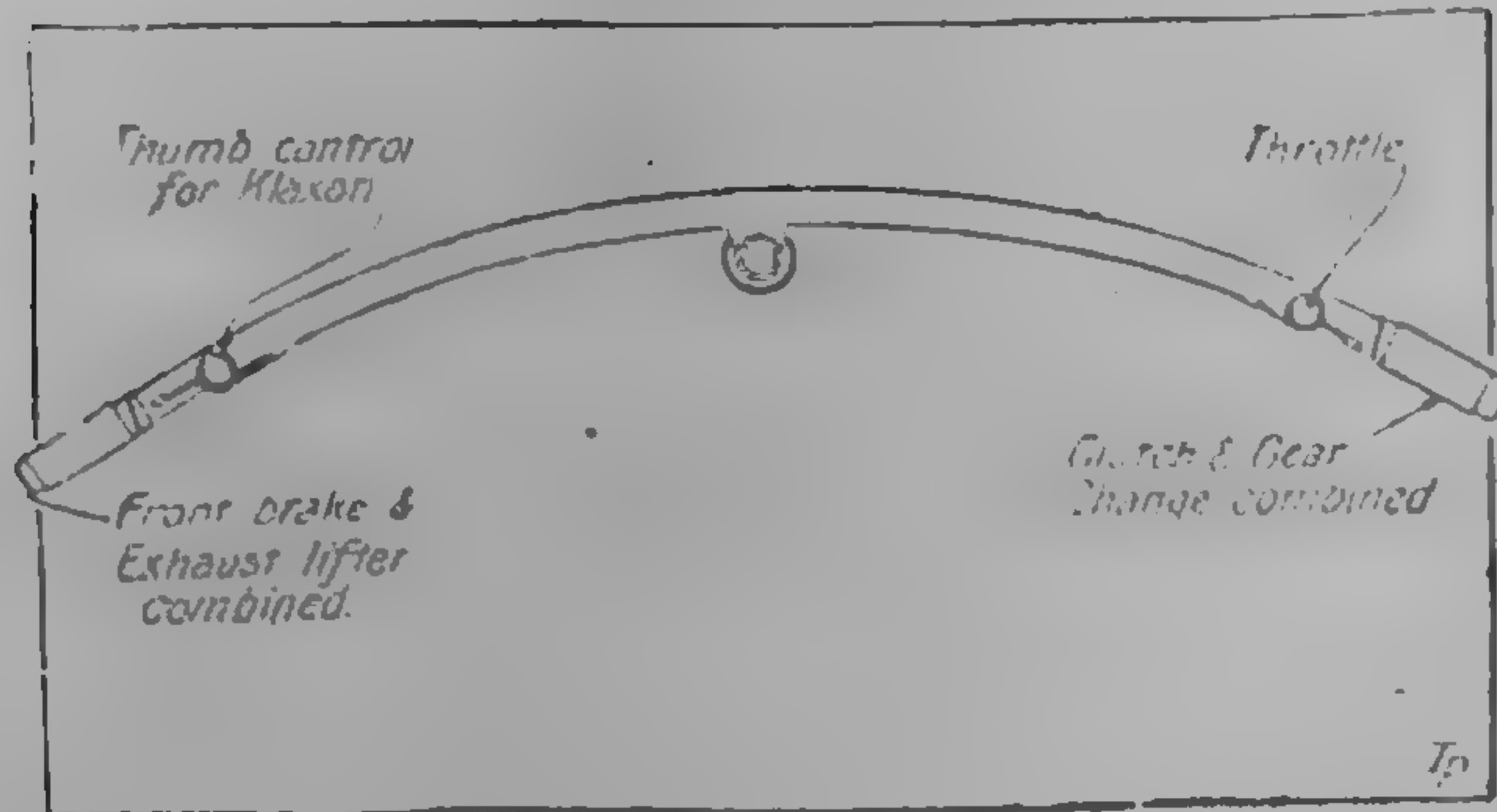


Fig. 4.—Complete handlebar, incorporating the controls described.

lever (A) moves round with the grip. This is essential, for the top finger (C) of the lever (A) locks into one of three small slots (D), which are cut on the end of the handlebar. These three slots correspond with the three speeds (or four in case of a four-speed gearbox), and they lock the gears in whatever position the rider requires them. Not only that, but the lever (A) must be partly operated before the finger (C) clears

the slots (D), so that before the gears can be moved the clutch must be slightly withdrawn. Thus, the chance of stripping the gears by careless changing is lessened. The inclined planes (B) can be cut at the most suitable angle, for only a slight movement is necessary at the handlebar.

The method of withdrawing the clutch slightly before changing gear may seem somewhat after the inter-connected systems common on some American machines, but still it is correct in theory, and once the rider became accustomed to it, it would become second nature. The points usually advanced against the inter-connected system were that it added to the complication, and that it was only the careless gear changer who had any use for it. The little finger (C) cannot be called a complication, for it is necessary as a gear lock, and although some riders prefer to lift the exhaust when changing gear, they can still do this with their left hand, so that on these two points this proposed system can hold its own.

The writer does not think this twisting action will interfere with the movements of the fingers in controlling the throttle, for after the gear has been changed the hand is free to assume any position it likes, without regard to the position of the grip or the lever (A). Fig. 4 shows the whole system complete. It will be seen that in place of the spark advance lever, Bowden control has been added for the horn, so that all the essential controls are on the handlebar and easily within reach. There are six of them, and all independent of each other; thus such a design should suit the expert as well as the tourist.

Some may criticise and say the controls on this handlebar are as numerous as ever; that the simplicity is more apparent than real; and that the real necessity is to cut down their number to two or, maybe, three. To this the writer does not agree, for it is held that inter-connecting in that sense spells inefficiency and reduces the riding of a motorcycle to a mechanical proposition.

J.M.

DISTINCTLY CONCERNING MOTORCYCLISTS. Personal Pars on Well-known Riders.

A MOTORCYCLIST despatch rider, Clement Furdon, in the A.S.C., related one of the most stirring stories on arriving in Hull as one of the repatriated prisoners of war. The son of a Bristol manufacturer, living on the Westbury Road, Durdham Down, Bristol, he was a student when war broke out. He volunteered, and arrived in France on 13th August, 1914, with the "Old Contemptibles." During the retreat from Mons he was despatched on a hazardous journey to a forward position. There was just the chance he would get through. Unfortunately he was surrounded by the Germans, but before he fell into their hands he set his machine alight and destroyed it. He was captured on 31st August, 1914, so that he has had over four years in captivity. During that period he said he made ten attempts to escape, and finally succeeded on 20th November. He has had long spells in German prisons. For 21 months he lingered in the fortress prison of Cologne. Nine months of that time he was awaiting trial on a charge of striking a German officer, for which he was sentenced to 12 months imprisonment. Asked why he did this, Furdon replied with some emphasis: "The man was brutally ill-treating some of my comrades." The Germans surpassed themselves in brutality when they thrust him

into a dark cell in which he could see absolutely nothing—this time for the alleged offence of insulting a German under officer. He was kept there for seven days without water and the only food he got was 2 lb. of bread. When he was released he was half dead. A Canadian was given similar treatment, but he died three days after he came out. Latterly Despatch Rider Ferguson had been working at coal mines at Herpest Doisten, and when the German soldiers expected the armistice to be signed discipline became very lax. Privates took command: officers were stripped of their badges, and some were shot. He and a chum, Pte. Walter Reed, of the Warwicks, took the opportunity to escape. For three days and nights they made their way through woods, marshes and forest with a compass as a guide, and crossed the frontier on 13th November.

I HAVE just received a note from G. Nott, the old Clyno rider, who put up such good performances on that make of machine in former days. He is now a private in the A.S.C., M.T., and is stationed at Osterley Park, which was, in my army days, the depot to which men were sent for instruction as both motorcyclists and light car drivers.

GIPSY Club members will be glad to have news of the original "Gipsy" to whom the credit for the inception of these social gatherings is due. He is now a captain in the R.A.F., stationed at Salisbury. An article by him on past and future activities of the club will appear in an early issue.

BEARING in mind the excellence of the photographs which have illustrated the recent touring articles which he has contributed to these pages, it is not surprising to hear that MOTOR CYCLING's American correspondent, John Edwin Hogg, is doing photographic work with the American Signal Corps. Writing shortly before the armistice was signed, he prophesied prompt overseas service, but this, of course, is not now probable.

AM told that R. E. Guest, the former Matchless rider, is now a bombardier in the R.F.A. and is acting as a drill-instructor. In pre-war days his Matchless combination was always to be reckoned with in open trials. A star performance was the lifting of the special gold medal for the best amateur performance in one of the last Colmore Cup Trials.

TRE A.P.M.



**The Rush Begins—Badges Now Procurable—Suggestions Wanted—
Plugs as Prizes.**

THE last issue of MOTOR CYCLING containing the announcement of the revival of the Gipsy Club had scarcely had time to get into the hands of readers before applications for membership began to arrive, and although only a few days have elapsed there are abundant signs that the resuscitation has been hailed with delight and that the Club will be even more popular in the coming season than in pre-war days.

Here are a few extracts from letters which accompanied application for membership forms:

"Best wishes for renewed success of the Club. We hope to enjoy again the pleasures of its future meetings."—R.S.H.I., Mitcham, Surrey. (An old member who writes to register himself, his wife and son.)

"Am looking forward to a repetition of former good times."—L.L., Maidstone.

"The most enjoyable times I ever spent on my motorcycle were when attending your picnics."—A.J.T., Greenwich.

"I have most pleasant recollections of my Gipsy runs, and hasten to ask you to register my former membership."—(Miss) M.E.A., Kingston.

"Please register us as members. We are looking forward to meeting many old friends and making many new ones."—Mr. and Mrs. J.C.J., Oxford.

As it is quite impossible, under the present conditions of staff, to acknowledge all applications for membership by post, will those who apply please watch this page for a notification? Up to the time of going to press applications have been received from:—W.H.B. (Fording), G.T.B. (Wimbledon), A.G.D. (New Cross), C.F.E. (Sudbury), H.K.G.G. (Orpington), G.E.H. (Southsea), C.H. (Hastings), A.H.H. (Liverpool), H.L. (West Bromwich), R.S.H.I. (Mitcham), M.L. (Bromesbury), S.J.M. (Clapham), R.N. (Nottingham), H.C.N. (Isleworth), H.N. (Fulham), E.R. (Barnes), A.S. (Barking), E.G.P.T. (Runcorn), L.L. (Maidstone), A.J.T. (Greenwich),



Members of "Motor Cycling" Gipsy Club enjoy to the full all the pastime has to offer. As its name implies it has, as its prime object, the fostering of gatherings of motorcyclists at chosen country spots where picnic parties are formed and impromptu meals arranged amidst charming surroundings. As a club it is unique. There is no entry or membership fee, no bothersome rules, and no restrictions of any nature save the observance of the usual courtesies of the road. Participants at the picnics have unique opportunities of making friendships with others whose very presence proves their appreciation of this most enjoyable side of the pastime. Further, they have unique opportunities of inspecting every type of motorcycle and of gathering first hand information of their characteristics. So popular did these meetings become in pre-war days that attendances of over two thousand were not uncommon.

Join to-day. A form of application for membership will be found on advertisement page iv. of supplement. Fill it in and post it to the Secretary, "Motor Cycling" Gipsy Club, 7-15 Rosebery Avenue, London, E.C.1, and watch this page for an acknowledgment. Do not send any money. The only expense in connection with the club is the optional purchase of a badge.

M.E.A. (Kingston), J.C.J. (Oxford), C.M.M. (Richmond), Misses L. E. and S. E. (Bristol), K. H. (Salisbury), N. and P.G. (Hammersmith), A.C.O. (Cambridge), F.F. (Cambridge), R.C.D. (Birmingham), Miss P.H. (Highbury), S.G. (West Bromwich), C.N.N. (Bournemouth), H.A.F. (Leicester), B.R.S. (Stoke-on-Trent), J.E.M. (Brighton), Miss D.S. (Margate), P.W.E. (Wood Green, N.), R.L.T. (Coventry), Miss V.E.T. (Newcastle), E.R.N. (Guildford), A.R.S. (Deal), D.O.P. (Wembley), M.M.M. (St. Albans), A.D.A. (Oxford), Miss R.G.N. (Henley), Mrs. F.H.P. (Brighton), Lieut. S.T.C. (Aldershot), W.J.C. (Birmingham), S.M.B. (Cromer). Acknowledgments of later applications received after this page had gone to press will be found at the foot of page 71.

DESPITE the statement to the contrary in last issue, we find on closer investigation that we have a small stock of buttonhole badges, brooch badges and small silk pennant flags left over from pre-war days. These can be obtained as follows:—Badges and brooches 2s. 1½d., small flags suitable for attachment to front number plates 1s. 1½d. each. In each case postage is included. They will be supplied in order of application, but as we find there are more brooches than badges in stock applicants must leave it to us as to which is sent. The brooches can be worn equally well by gentlemen as by lady members. Postal orders should be made payable to MOTOR CYCLING Gipsy Club and should be crossed.

SO far as can be determined at present it is proposed to hold the opening meet on one of the Sundays in February next. The venue has not yet been decided, and suggestions on this point will be welcomed. It is probable that, as on former occasions, some impromptu sports will be organized at the picnic, and ideas for the general entertainment of members will be appreciated. A MOTOR CYCLING sparkling plug will be awarded to each member submitting a suggestion which is ultimately adopted.

Reduction in the Price of Petrol.

THE price of petrol was reduced by 2d. per gallon from yesterday (Monday). Motorists may take it that this is the first of a series of gradual reductions which will be announced in the near future.

An Interesting Specification.

THOSE readers who enjoyed Major S. R. Axford's recent article on the next T.T. Race will be interested in an article which will appear in an early issue and in which Major Axford will outline his ideal T.T. mount.

Is it Unity at Last?

EFFORTS have been in progress for some time to establish a permanent basis of conference on general matters affecting the interests of motorists. We are glad to announce that the efforts are likely to have the desired result this week, and we hope this implies that unity of action is at last likely.

A Radial Five-cylinder Engine.

IN "The Light Car and Cyclecar" this week there is an illustrated description of the new Enfield Allday light car, fitted with an air-cooled five-cylinder, radial, stationary engine of 1247 c.c. There is also a description and illustrations of the new 8 h.p. Peugeot light car.

Sale of War-worn Motor Vehicles.

A TOTAL of approximately £1,200,000 has been turned into the French Treasury as the result of sales of war-worn motor vehicles of all kinds to the public. The French War Department has established a huge open-air sales department on the Champ de Mars, behind the Eiffel Tower, and at frequent intervals auction sales are held of motorcycles, cyclecars, touring cars, lorries and tractors. The motorcycle section usually comprises about 100 machines of every make and date, in all kinds of conditions. The public is allowed to examine the machines in detail, but cannot run the engines, for not only is petrol not provided, but very few of the machines really are in running condition. A minimum price is fixed for each machine and purchases are made under a system of sealed bids. These bids are opened in public on a certain day, the results are announced immediately, and the highest bidder can take the machine away with him. This system has given very satisfactory results, for it is rarely that machines are left over, and in almost every case the offers are higher than the minimum price fixed. In one year 1826 motorcycles have been sold in this way. While some of the motorcycles can be made really serviceable machines in the hands of a skilled mechanic, others are so out of date that it is difficult to understand to what use they can be put. Notwithstanding, somebody can usually be found ready to purchase them.

NEWS in**Lighting-up Time for Saturday,
7th December, 1918.**

London	4.20 p.m.
Newcastle	4.7 p.m.
Birmingham	4.22 p.m.
Edinburgh	4.37 p.m.
Liverpool	4.21 p.m.
Bristol	4.30 p.m.
Dublin	5.5 p.m.

Lighting-up time for Ireland and Scotland is one hour after sunset, but the Scottish lighting regulations (vehicles) come into effect half an hour after sunset.

Lighting-up time for Ireland and Scotland is one hour after sunset.

Moon.—No moonlight this week-end.

Benevolent Fund Meeting.

THE annual general meeting of the Benevolent Fund will be held at the Connaught Rooms at 4 p.m. on 12th December. This meeting will be one of the most important which has yet been held in the history of the Fund, and a full attendance is hoped for.

Applications are being received at Clerkenwell Road from subscribers who are expecting shortly to be discharged from the Army and who are anxious to get back to their old work. In many of these cases conditions have so altered that the old job is not open, and the Fund is anxious to do all that is possible to find with the least delay openings for all these men. A register of employees is already in existence, and a register of employers, to whom Mr. Wilson will send weekly lists of all men in need of employment, with particulars of their qualifications, etc., is in course of compilation. Will all employers who will assist themselves and our returning heroes by having their names placed on this register communicate with Mr. A. J. Wilson.



The sale of French
war-worn
motorcycles.

On the left is shown
a collection of
the machines open
for inspection
by the public.

On the right a would-
be buyer testing
his possible purchase.

BRIEF

Amendments to D.O.R.A.

AN Order in Council was made last week by which a number of regulations under the Defence of the Realm Act were cancelled. The cancellation of the lighting restrictions, however, contains an important provision. It stipulates that the regulations with regard to lights on vehicles remain in force. It is understood that in this case legislation is pending which will limit the power of headlights and make compulsory the fitting of rear lights on all vehicles, including bicycles and motorcycles. It is commonly supposed that D.O.R.A. dies when peace is announced, but its actual termination is six months after the declaration of peace, and it is more than probable that many of its provisions will remain in force and be covered by fresh legislation.

Petrol for Food Delivery.

TRADESPEOPLE who have sidecarriers will be interested to note that the Petrol Control Department is now in a position to consider applications for motor spirit licences for the purpose of distributing food.

A War Memorial Scheme.

A GREAT high road from Liège to Paris, planned to pass through as many places as possible that have been rendered historical during the war, is the form of a war memorial scheme. Its author is Mr. R. G. Knowles, the well-known comedian.

Information and Advice.

WE are simply overwhelmed with inquiries respecting new machines and we have many letters awaiting reply. We regret that owing to the pressure of these very busy times and the shortage of staff, we are unable to reply promptly. Furthermore, the information in most cases is given in our columns, and beyond details published it is impossible to go.

Selling Your Old Machine

"THE MOTOR" for 10th December will have a special supplement of traders' bargains. For the benefit of motorcyclists a column of "line" advertisements will be reserved for second-hand machines.

Motorcycle Manufacture Can Begin.

WE are informed that the Ministry of Munitions has notified the industries concerned of the partial withdrawal of the war restrictions on the metal trades. It is understood that there is no shortage of raw material in the industry and orders can be accepted for forgings, stampings and castings.

Election Cars Tax Free.

IT is announced by the Automobile Association that motor-cars which are put into use for the General Election, and no other purpose, during 1918, will not be liable for the Inland Revenue tax. It is highly probable that motorcycles will be used to a considerable extent in connection with the Election, and we understand that these also, if used for this and no other purpose, will not be liable for the tax.

Carbide Obtainable Once Again.

RESTRICTIONS as to the sale and purchase of calcium carbide have been removed as and from the 1st inst., but the maximum price to consumers has been fixed at £40 per ton for quantities of 1 cwt. and over. No applications for the use of carbide need be made to the Ministry of Munitions, nor is it necessary to furnish returns of stock as has hitherto been the practice. It should be obtainable through ordinary trade channels in the immediate future, but the Government reserve the right to give preferential deliveries to the shipbuilding trade should the exigencies make it necessary.

The Amended Motor Spirit Order.

THE terms of the Motor Spirit (Consolidation) and Gas Restriction Order, 1918, have now been amended by an Order dated 1st December, the following paragraph being the material one:—

Nothing in paragraphs 2, 3, 4, 5 or 9 of the Principal Order, or in paragraph 3 of the Amendment Order, No. 1, shall prevent the use of petrol or petrol substitute obtained under the provisions of a motor spirit licence, or of gas by the holder of a gas permit, for the purpose of driving any motor vehicle or motor boat for any purpose within a radius of 30 miles from the place where such vehicle or boat is usually kept.

The important new information is that the radius of 30 miles is from the place where the car is usually kept.



The sale of French war-worn motorcycles. On the left is shown a collection of the machines open for inspection by the public. On the right a would-be buyer testing his possible purchase.

Work For Winter Evenings.

AN AMATEUR'S ALUMINIUM PISTON.

THE writer has spent a portion of this period of inactivity in carrying out an improvement which might easily be undertaken by any mechanically-minded reader who possesses a small lathe. The want of this handy tool need not deter a would-be imitator though, as the necessary turning work could be sent out to a local garage.

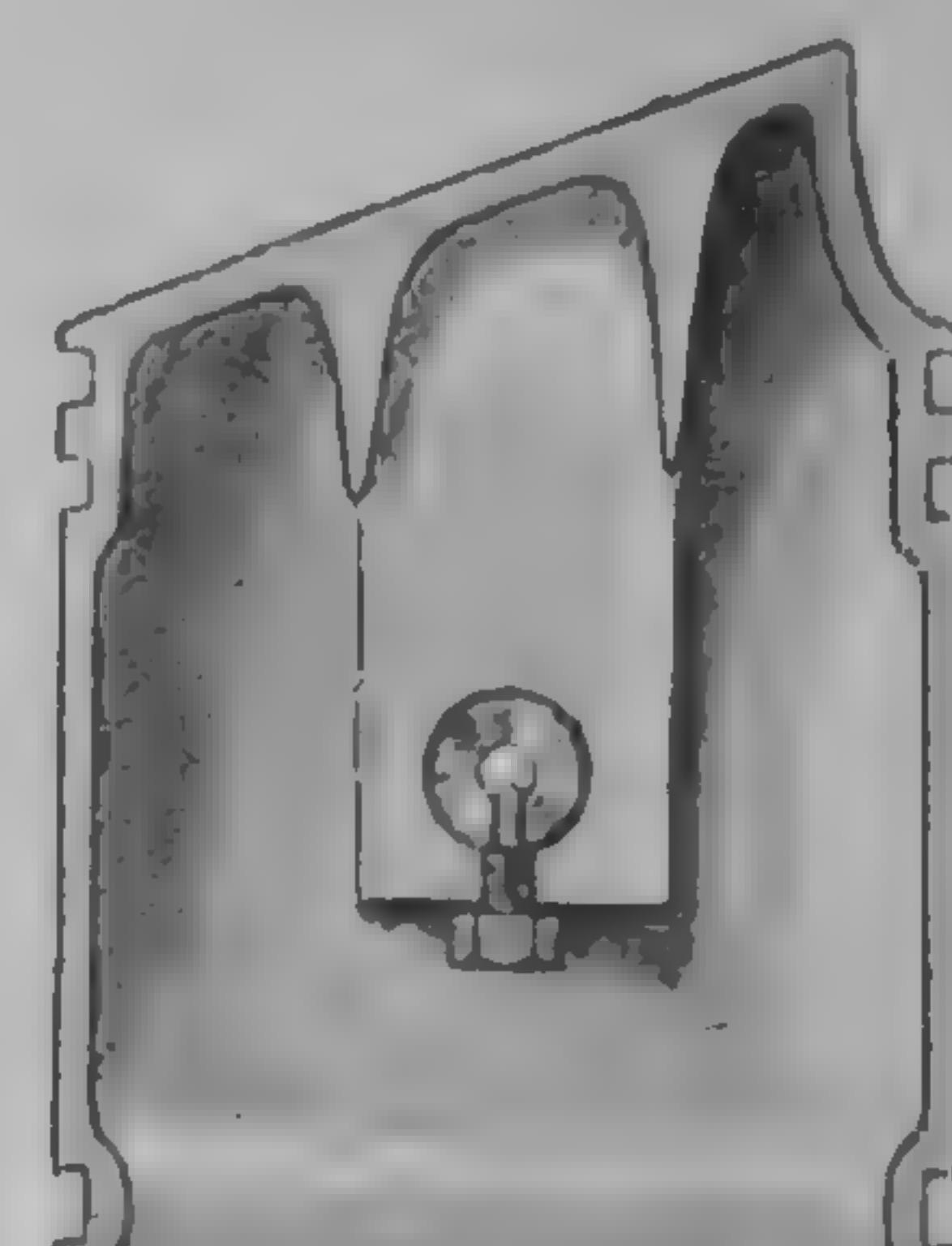
The piston of the writer's two-stroke machine was cracked across the head, and the fitting of a new one became imperative. The advantages and possibilities of aluminium in place of cast-iron, on which several articles have appeared in MOTOR CYCLING, had made a strong impression, and it was decided to construct an aluminium piston as an experiment.

With this end in view three ordinary bath-bricks were procured, wherewith to make the mould. The necessary core was first undertaken. This was carefully filed and shaped to an exact replica of the inside of the old piston. Slots were cut to permit the core passing the gudgeon pin bosses, after which these slots were enlarged to about 1 in. in width so as to leave plenty of metal to support the gudgeon pin. The lower end, or skirt, was filed away in order to give the necessary thickness of metal for the bottom ring groove.

The cooling fins in the head were carefully shaped and all the corners rounded off smoothly, after which the core was inserted in the old piston and a hole—in this instance $\frac{3}{8}$ in. diameter—drilled through for the gudgeon pin.

The core being thus finished, the remaining two bricks were taken in hand and a smooth surface procured on one face of both by rubbing them together. On the surfaces thus obtained the exterior shape of the old piston was carefully marked off and subse-

Fig. 3.
Section
through the
piston.
By comparing
the inside
contour with
the core
shown at A
(Fig. 1) the con-
struction of
the latter can
be better
understood.



quently sunk in, as shown in B, Fig. 1. An allowance of $\frac{1}{8}$ in. was given to permit of shrinkage of metal and subsequent machining.

The small ends of both the core and mould were made a perfectly good fit, after which a channel was cut down the side of the core for pouring in the metal. This channel was made $\frac{3}{8}$ in. wide by $\frac{1}{2}$ in. deep. A small projection was cut at the head of both halves of the mould so as to leave a small "knob" of metal for centring.

To ensure the steadiness of the top end of the mould a dowel was fitted as shown in Fig. 1. A piece of arc-lamp carbon pushed tightly in the

gudgeon-pin hole in the core served the double purpose of forming the hole and, by being made a tight fit in the mould, of supporting the core centrally.

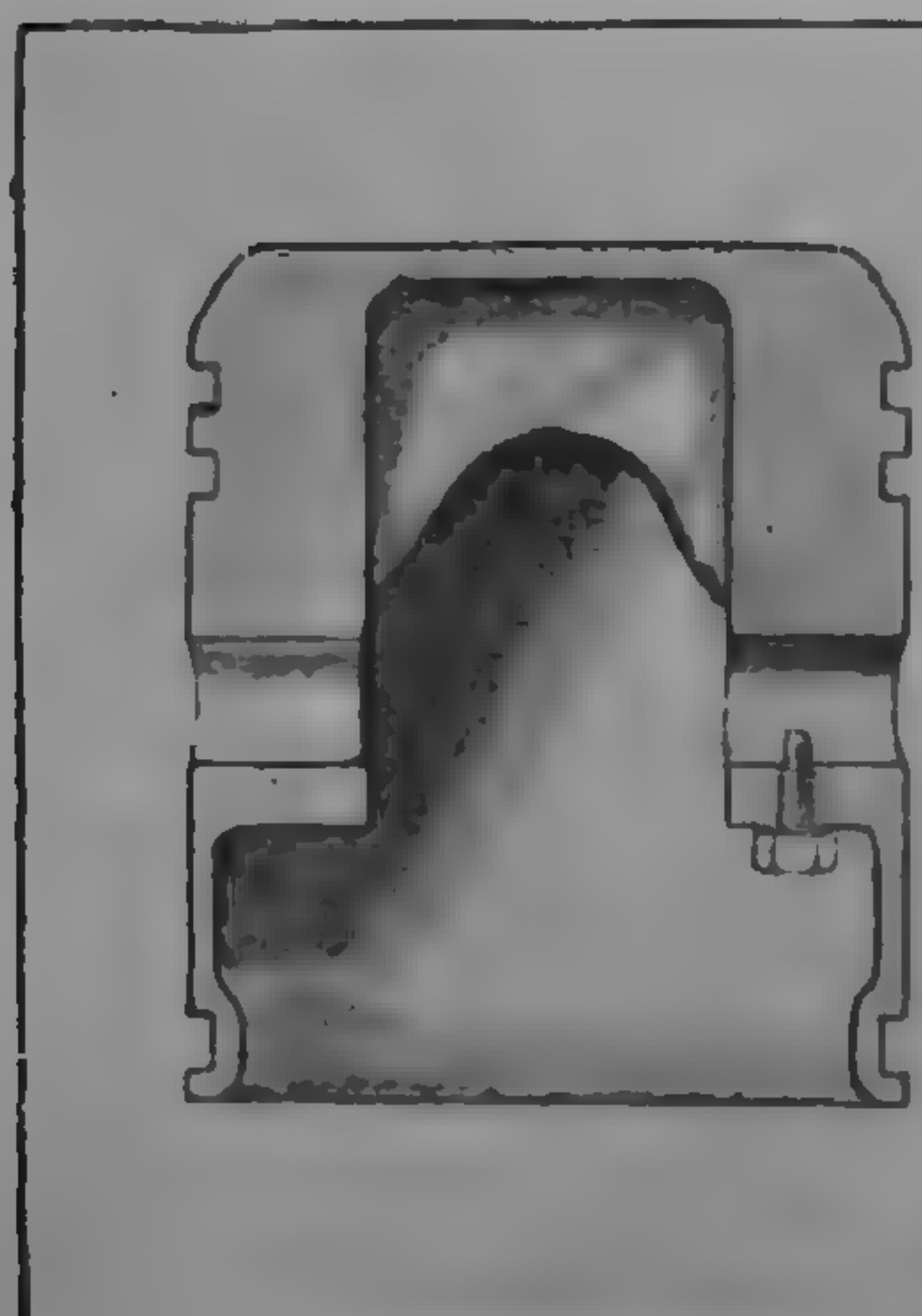
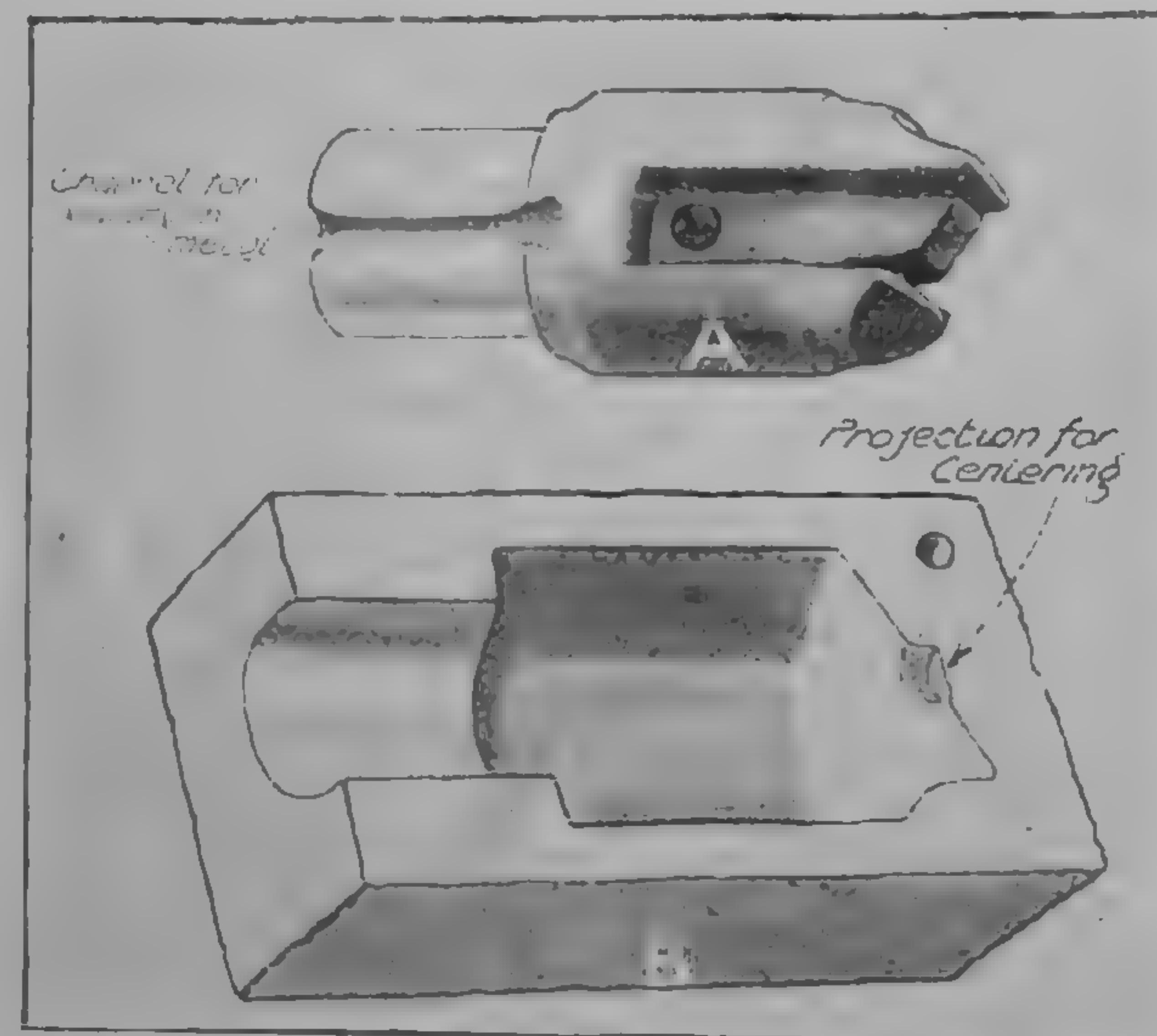
The whole was now assembled and bound firmly with wire preparatory to the cast. The metal used was composed of equal parts of old castings and scrap sheet. This mixture was found to give a good tough casting and possessed the additional advantage of machining well. The melting presented no difficulties and was done in an old ladle on a blacksmith's fire. The subsequent turning also proved simple. It was found to be policy to leave a little more space between the two top rings than if cast-iron was used, as well as a little more working clearance.

In Figs. 3 and 4 sections of the finished piston are shown as well as the method of fixing the gudgeon pin. This latter is hollow; the fixing screw fits tightly at the head and is easily removed by means of a small box spanner.

Although in this instance the piston happened to be of the two-stroke type, naturally a four-stroke pattern could be made just as easily. E.M.P.

(Above) Fig. 1.
(A) the core,
and (B) the
mould
or core box.

(At left) Fig. 2.
Section
through
piston, showing
gudgeon
pin bosses.



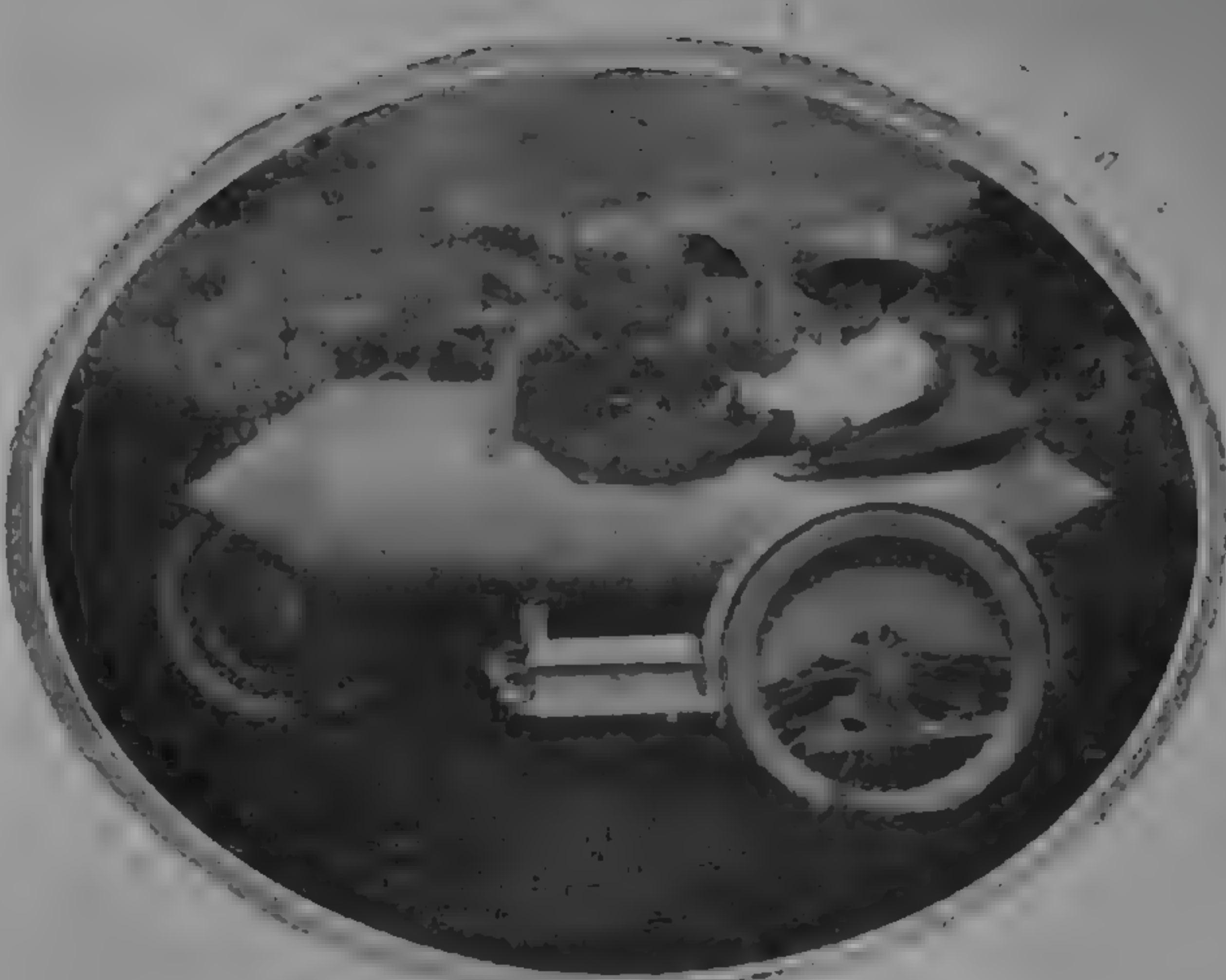
RESULT OF THE SIDECAR BODY COMPETITION.

Many Entries, But Designs Disappointing on the Whole.

THE entries for this recent competition were very numerous, but it is unfortunate that the standard of merit was not very high. In too many cases the competitors limited their efforts to endeavouring to add refinements to existing designs, and where originality was attempted the results were, for the most part, unsightly.

The prizewinner, "A.W.E.," has obviously based his design on the well-known "Canoelet," but that he has expended much thought is obvious by the very clear constructive details which he gives, and which were published in our issue of 29th October. If "A.W.E." will kindly claim, a cheque for £2 2s. will be forwarded in due course.

One of the more novel of the competing designs is given below.



The finished sidecar described below.

AMPLE CAPACITY WITH COMFORT.

IN the following design attention and thought have been given to comfort, convenience and even luxury, as well as the general clean overall appearance, thus making a perfect all-weather sidecar body.

So far as the wind resistance is concerned, there is only the dash to be considered; in this design it causes the draught to go over clear of the passenger's head. It also prevents rain and wind entering the sidecar from under the apron. A passenger riding in this sidecar will be particularly free from dust and mud thrown up by the machine.

Inside the body itself, numerous lockers have been designed to meet the particular needs and conveniences mentioned. Following the drawings, No. 1 (Fig. 1) will hold three inner tubes, one spare belt, one spare chain, a large repair outfit, several dusters or clean rags, and a couple of 1 lb. tins of carbide. No. 2 will hold overalls and macintoshes for wet weather. Spare neck wraps, gloves and that very useful article a clothes brush can be accommodated in No. 3. No. 4

will take the driver's straw hat, also another of a different type if required. Two ladies' hats can be carried in No. 5, a convenience the ladies will appreciate, as they like a change of head gear when at the other end of a ride, especially if going to a friendly gathering some miles out.

In the front of the sidecar a dress basket or other bag about 15 ins. by 15 ins. by 9 ins. can be fixed as shown, also a larger bag or trunk, 15 ins. by 24 ins. by 10 ins. Both these bags are held in position by a single strap, and are easily taken out or put in whenever required. There is also plenty of room for a walking stick, umbrella, sunshade or even golf sticks. These can be placed by the side of the passenger at the side of the seat, and will not be in the way. It is quite clear that all the above-named articles can be carried inside the sidecar body, out of sight, kept clean and free from dust or dirt, out of the way of the passenger, and they cannot get lost.

The footrest is adjustable to suit the passenger's convenience; the seat can be adjusted to suit individual requirements. It can be arranged to slide forward, also to be made higher or lower at the front of seat, the back being so fitted as to move with the seat. The back can be taken out of the sidecar quickly and easily, so that anything in the lockers behind the seat is easily got at. In the event of a puncture, the spare tube can be got at without disturbing the passenger.

From a manufacturing point of view, it is simple and cheap to build. Referring to the drawings Figs. 2 and 3, there are three rims or bands, shown at A, and a support (A₁), which may be of some light metal. Four straight bars of angle metal (B) are riveted or bolted to the bands as shown; this forms the frame or skeleton, upon which the body is built. The body may be of sheet aluminium, or galvanized metal; the drum portion can be made up from one piece, or three, as found suitable. The ends or points can be cut each in a single piece, with the joint coming on the underside; the dash also can be cut in one piece. The springing

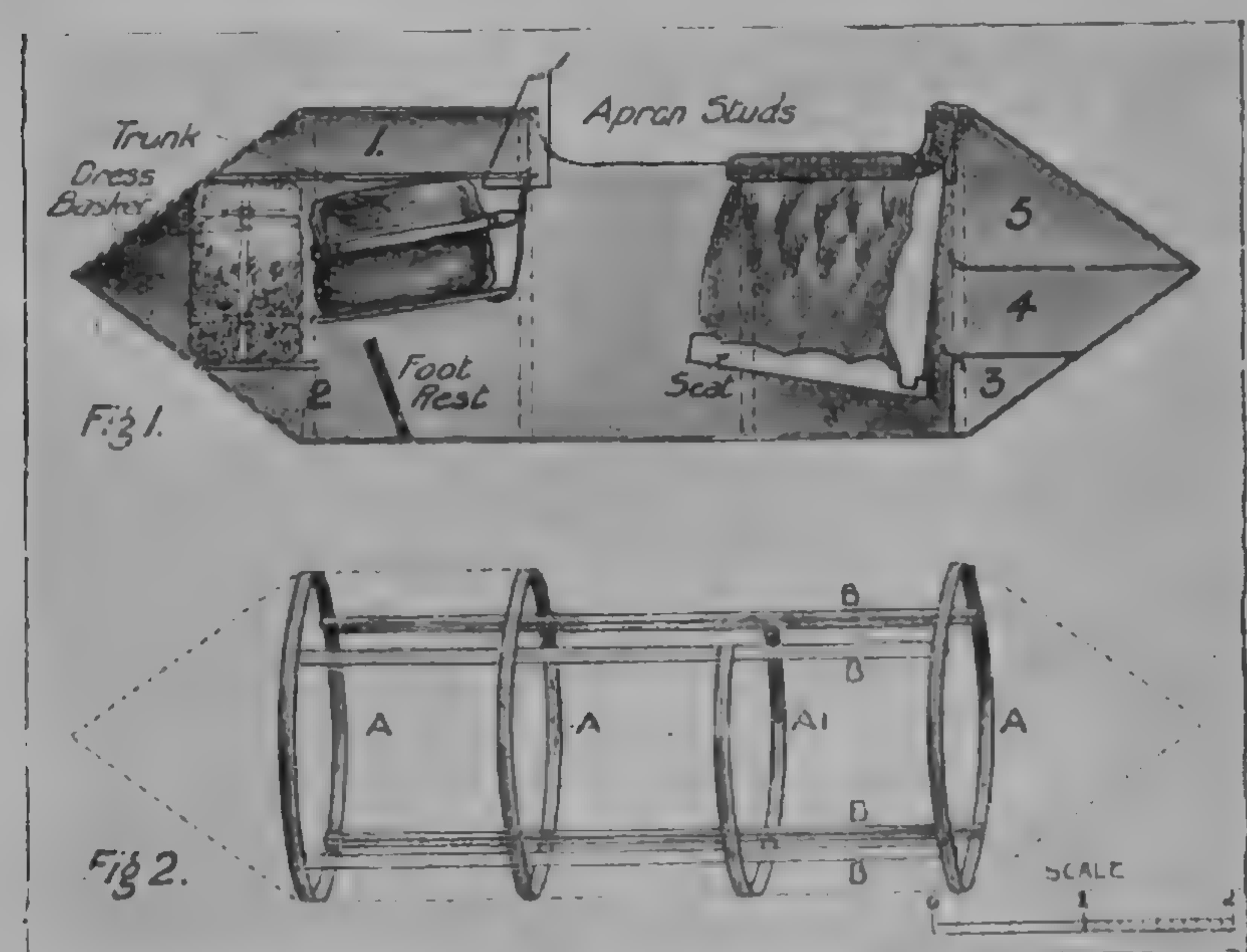
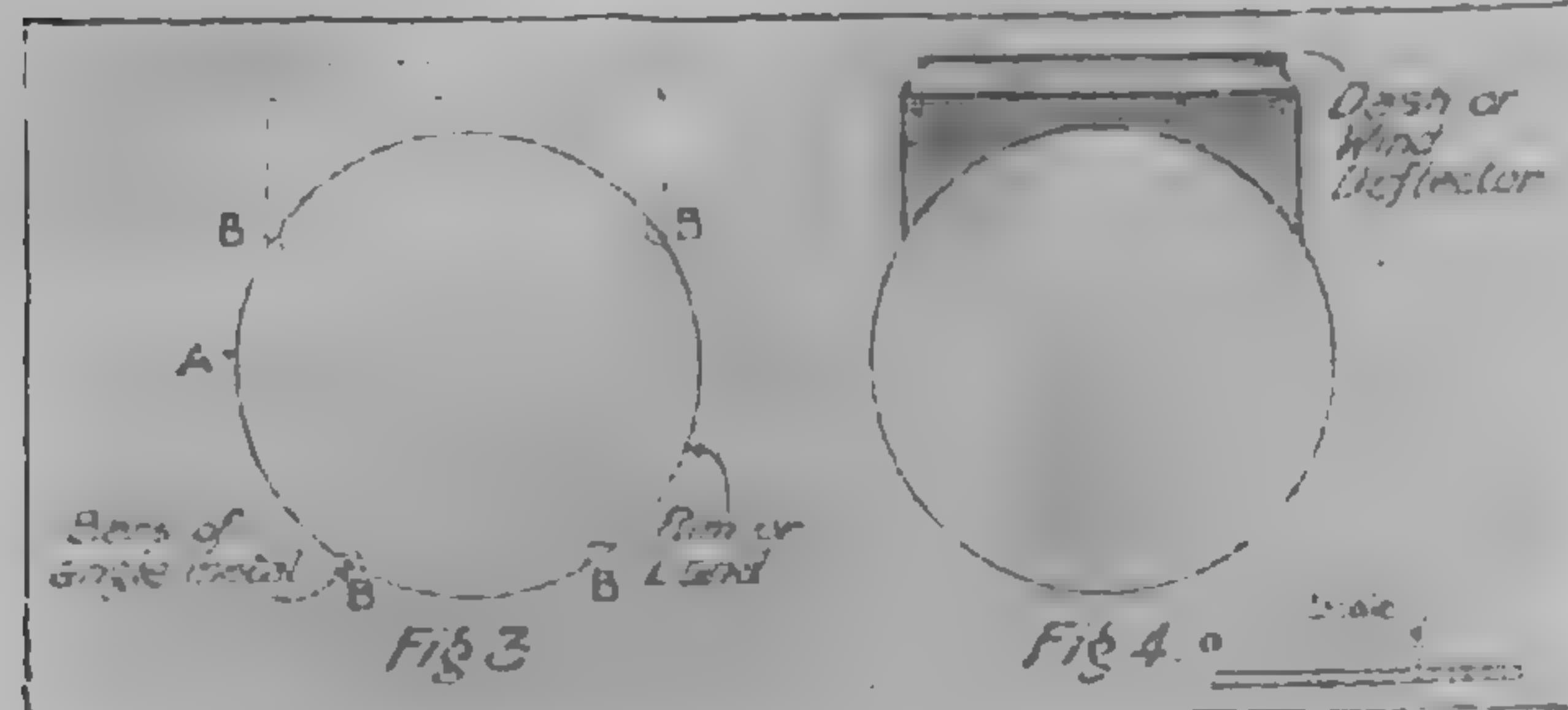


Fig. 1—Body in section, showing luggage lockers. Fig. 2.—Details of main framework.

Ample Capacity With Comfort (contd.).

is simple, and the upholstering presents no difficulties. The weight is reasonable, being between 80 lb. and 90 lb. (a W.D. Douglas sidecar body weighs 73 lb.). There is not very much in the weight question when



Figs. 3 and 4.—Sections through body.

one considers the advantages gained—that other sidecar bodies have not the same convenience and they require a luggage grid, which means extra weight, whereas this body requires no luggage grid.

The outside diameter is 26 ins.; the total length 90

ins., or 2 ins. longer than a 1916 4 h.p. Douglas motorcycle, which measures 88 ins. The drawings are to scale, 1 ft. to the inch. No door is fitted, as with a step toolbox fitted to a modern chassis a door is not needed. One could be fitted, but it would add to the weight, also the cost, and the wearing abilities would not be so good with the door as without it.

Fig. 4 shows the front view; Fig. 5 the general clean appearance. A body as described has many advantages, not the least of which is the lack of corners, upon which the enamel is so easily damaged. With a hood fitted it is the acme of comfort. W.H.M.

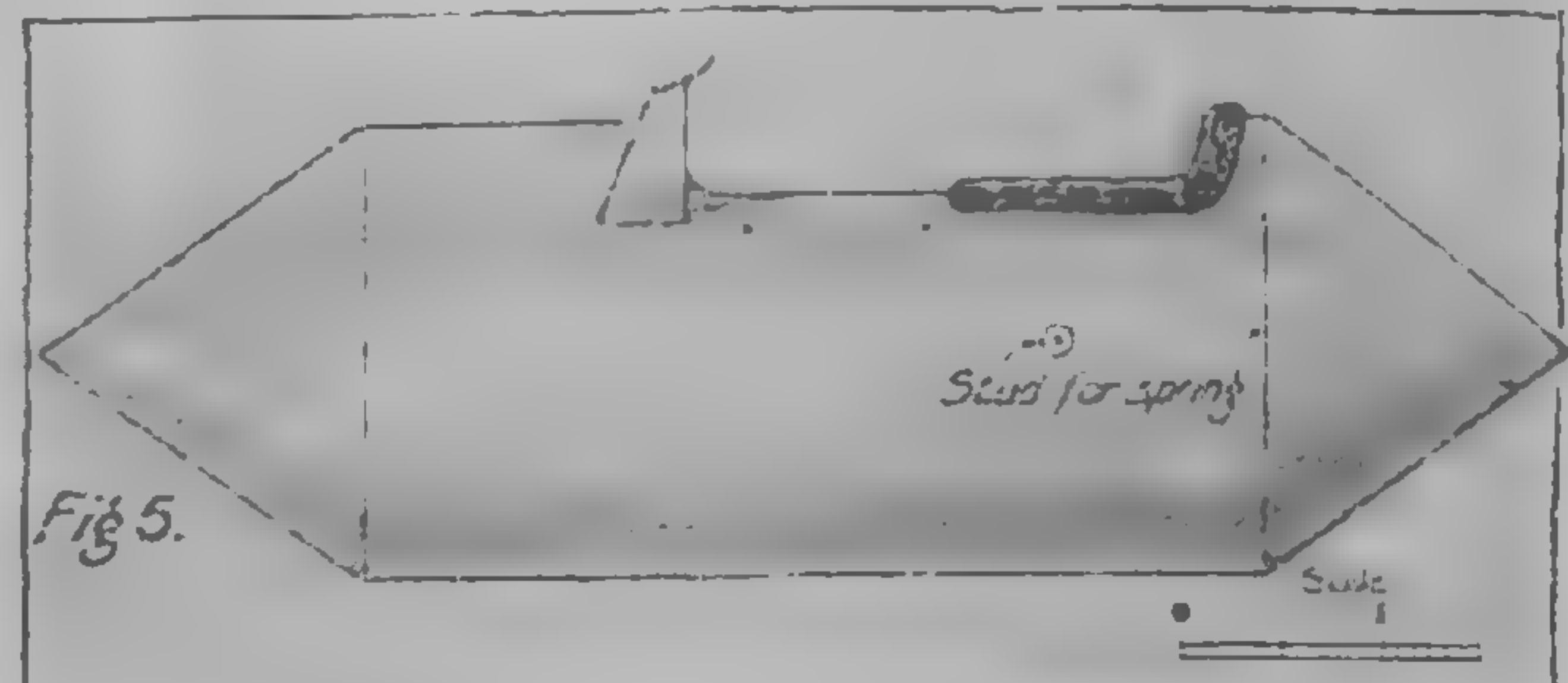


Fig. 5.—Side view of completed design.

STOCKS AT AGENTS.

Where New Motorcycles Can be Obtained.

IN amplification of the list which we published in last issue we are advised by D. C. LAMB, of 151, High Street, Walthamstow, that in addition to the new machines he has in stock, and of which details have already been given, he has promptest delivery promised of 3 h.p. Enfields, both roadster and T.T. models, war-models Matchless, two-speed Levis, 3½ h.p. Ariel combinations, war-models Rover and James, and 3½ h.p. single-cylinder P. and M.

JAMES FRYER, LTD., Commercial Road, Hereford, inform us that while they have no new machines actually in stock at the moment, they are advised that they can expect early deliveries of A.J.S., Sunbeam, Harley-Davidsons, Clyno, Royal Enfield, Douglas, Norton, B.S.A., and James. Motorcyclists touring in their district should seize the opportunity of calling in to see R. P. Ravenhill, the old Rover exponent, who did so well in competitions in 1913 and 1914, and who is now the manager. Associated with him is Eric Williams, the Junior T.T. winner of 1914.

who was one of the first D.R.s to be awarded the D.C.M.

Messrs. JONES' GARAGE, of the Broadway, Muswell Hill, have quite a quantity of new motorcycles in stock. These include a Royal Enfield combination, two New Imperial lightweights, B.S.A.s (both solo mounts and combinations), two Rovers (T.T. and countershaft gear models), two Ixion lightweights, and three war-model Matchless. Early deliveries are expected of A.B.C.s, Allons, Ariels, B.S.A.s, Calthorpes, Douglas, Enfields, Harleys, Indians, Ixions, O.K., J.A.P.s, Triumphs, etc.

Some time ago Messrs. Jones' Garage contracted for over 200 new motorcycles and combinations of various makes, and they have been informed by the manufacturers that they will rank for very early priority. At the time of writing they have in stock 53 combinations and 32 solo mounts, second-hand, all by well known makers, as well as a considerable stock of brand new sidecars, coachbuilt, including several double-seater models.

OUR COMPETITIONS.

"Victory" Competition.

IN addition to the ordinary contributors' rates we are offering three bonuses of £2 10s., £1 10s. and £1 respectively for articles selected as being the best of those submitted and appearing in MOTOR CYCLING up to and including the issue of 10th December. These articles should preferably be of topical interest and suitable for illustration. Contributions must be clearly marked "Victory Article" on the MS and addressed to the Editor, MOTOR CYCLING, 7-15, Rosebery Avenue, E.C. 1.

Ten-shilling Note Competition.

A MOTOR CYCLING 10s. note (franking the purchase of goods to this amount from any advertiser in our pages) will be awarded to the senders of the best essays on "My Most Ingenious Repair. Rough sketches should accompany the attempts. Contributions should be limited to 600 words and should be written on one side of the paper only. The closing date will be 1st January, 1919. Attempts should be addressed to the Editor, MOTOR CYCLING, 7-15 Rosebery Avenue, London, E.C. 1, and marked Repair.

The Institution of Automobile Engineers.

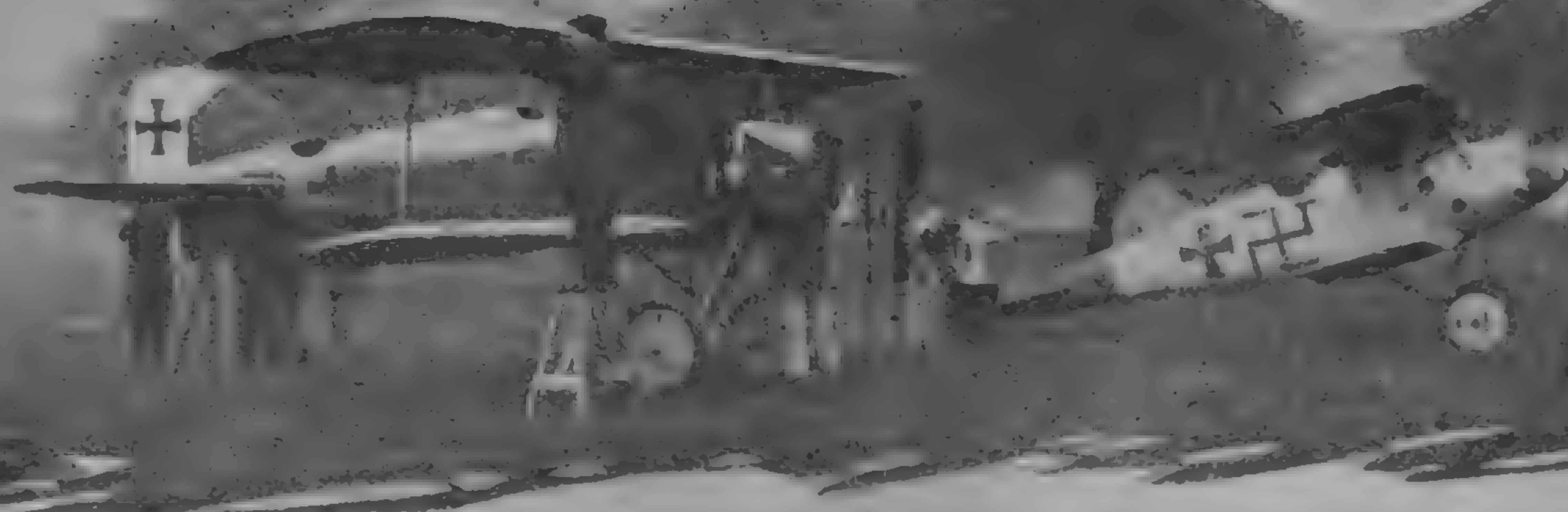
THE third meeting of the session of the Institution of Automobile Engineers will be held on Wednesday, 4th December, at the Royal Society of Arts, John Street, W.C. 2, when Mr. A. E. Berriman will read a paper on "Analyses of Some Engine Tests." Cards of invitation to the meeting may be obtained on application to the Secretary of the Institution of Automobile Engineers, 28, Victoria Street, Westminster, S.W. 1.

New British Industries.

ON Friday, 29th November, in the Conference Room of the Hotel Metropole, at 3 o'clock, Mr. Kellaway, Parliamentary and Financial Secretary to the Ministry of Munitions, addressed a meeting of the Industrial Reconstruction Council on "Developments in British Industry During the War." Mr. Kellaway made an important statement not only on the development of existing industries, but on the establishment of new industries formerly monopolized by enemy countries.

Air Arts and Crafts

Aviation
Notes for
Motorecyclists
J.D.



Two of the captured German aeroplanes on view in St. James's Park.

REPAIRING AN AERO ENGINE.

WHEN an aeroplane is damaged in the field it is first examined in the squadron workshops, and should it not be too badly damaged it is repaired there. It is with the engine that we are more particularly concerned now, and should the damage be too serious for the squadron workshops to deal with it eventually finds its way back to England, accompanied by its log-book.

As each new engine leaves the works where it has been built it is supplied with a log-book which accompanies it always, and in which all entries of flights, petrol and oil consumption, defects and repairs, are recorded. Many of these log-books tell interesting stories when finally the engine gets a "blighty" and arrives at the repair contractor's workshops. The entries are brief and in bald, official language, but none the less very eloquent to one who from experience can read between the lines.

"Machine destroyed by enemy aircraft. Pilot wounded," ran one entry, and the state of the engine supplied the details necessary to complete the story. Everything was blackened and burnt, the magnetos were hardly recognizable, the carburettor and other aluminium parts had commenced to melt, and there were sinister bullet marks and holes in several places. Lastly the broken propeller boss and the bent shaft, still covered with dried mud, told of the final crash, and one could only wonder at the entry "Pilot wounded."

To return to the repair shops, the engine is stripped down and thoroughly washed and cleansed, and all the components, whether damaged or apparently sound, set out on a bench to be examined. The examination is very thorough, even bolts and nuts being sorted over. On an engine which has suffered as described above there is much which may be scrapped at sight, the propeller shaft and boss, for example, but every component which is apparently undamaged is subjected to the most searching sorting and no doubtful component is allowed to pass lest some brave man's life be jeopardized when the engine returns to active service. The scrapped components are replaced by new parts issued from stores, and

the engine is rebuilt, under constant supervision, and subjected to severe tests.

Not every engine is so badly damaged, of course, and it may be mechanical breakdown which is the trouble. Sometimes a connecting rod has broken and the end, flying round, has bent the crankshaft and knocked holes in the crankcase.

Sometimes the lubrication system has failed and the engine seized up, and in this case where aluminium pistons are fitted anything may happen. The cylinders may be scored hopelessly, the pistons burnt right through the head, the rings often being almost invisible owing to the aluminium being drawn over them. It is almost incredible how white metal can score a steel journal, but a big-end bearing running may scrap a crankshaft.

A very interesting engine to examine is one of the air-cooled type which has crashed into water. The cylinders may appear undamaged and yet minute inspection will reveal tiny cracks round the valve seatings. Any ball or roller bearings are almost sure to be badly pitted with rust in this case, and if the crash has been into salt water the aluminium parts are practically certain to be badly corroded.

Sometimes an engine is said to have been "trench digging"—the front of the crankcase is smashed in and the base filled with earth and stones. Another engine had evidently finished up in the sea, for a shrimp was found in the crankcase! CHASSEUR.

THOSE who recollect the recent article in these pages on the possibilities of the all-metal aeroplane will be interested in the liberation of details of a German attempt to construct such a machine. It was fitted with a 220 h.p. engine. The plane spars were tubular and covered with a thin aluminium alloy sheet. There were no wires to brace the planes as in other types. The Germans found it most difficult to control, and any saving which may have been effected by protecting the crew from the rifle fire of our troops was counteracted by the losses from crashing.

THE UNSATISFACTORY REAR STAND.

I.—Some Causes of Its Failure.

WHEN tyre trouble overtakes the motocyclist he can jack up his rear wheel without any trouble, for he carries a jack always ready in position, namely, the stand. To some extent, therefore, he has an advantage over the car driver, who, before a wheel can be changed, must rescue a jack from the lumber in his tool locker, first disturbing his passenger before the locker can be reached. There is, in fact, no doubt whatever that a modern sidecar outfit, fitted with detachable wheels, is better equipped for overcoming tyre troubles than is the most expensive car.

Of late, however, there has been a decided tendency in the car world to follow motorcycle practice in this

contact with the ground, so that the pivot (A), and with it, of course, the rear of the machine, moves backward and upward. The rear axle weight of the machine (W), acting downwards, opposes the effort exerted by the rider, when he hauls at the carrier of the machine. This effort will obviously be exerted to the best advantage if it is applied in a direction at right angles to the stand leg (AB), and assuming this to be done, F must then equal $W \cos \theta$, where θ is the angle which the stand leg makes with the ground. In this particular case θ is approximately 45 degrees, so that $F = .7W$, and, assuming the weight of the machine to be equally distributed between the front and rear wheels, as is approximately the case with this machine, $F = .7 \times 140 = 98$ lb.

An Initial Lift of a Hundredweight.

Since no one but an exceptionally tall man could exert his effort on the carrier at 45 degrees to the horizontal, we may safely assume that a larger effort than this is required, and that the rider must consequently exert a pull of about a hundredweight to start the machine lifting on to its stand. Is it any wonder that middle-aged riders complain of the difficulty of handling our modern machines? To pull well over 100 lb., in a most uncomfortable position, is not child's play for anyone, and it is hardly reasonable to expect a lady rider or a disabled man to put up with such a necessity.

It should be noted that this effort is only required to start the machine lifting. Providing the effort is always exerted at right angles to the position of the

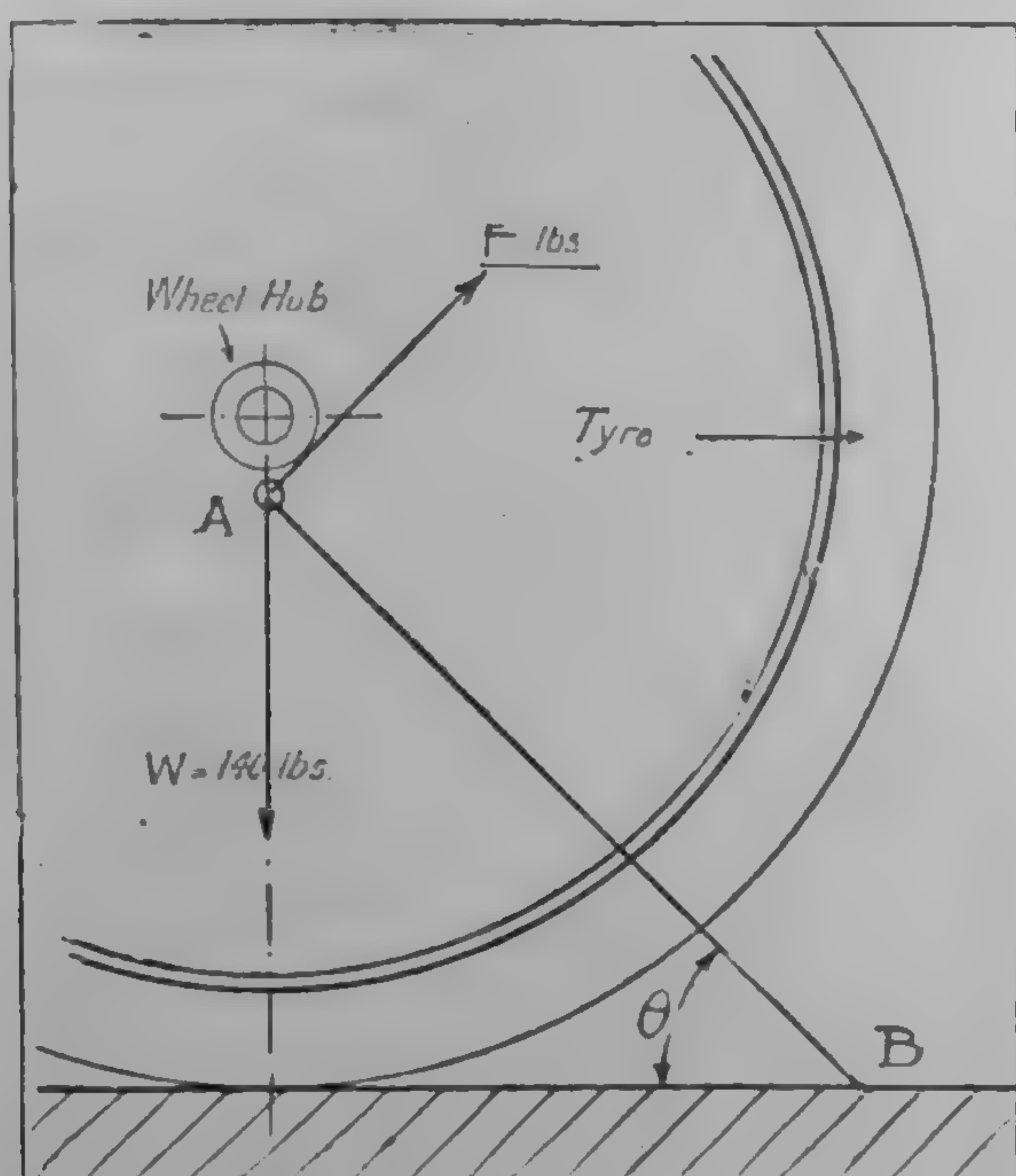


Fig. 1.—The forces which have to be overcome.

respect, by fitting jacks permanently in position on the car near each wheel. The car designer goes further than his brother of the two-wheeler by making the car jack so easy to operate that even a child can raise a car weighing two tons without undue exertion. It is therefore reasonable to ask our motorcycle designers to provide us, now that peace has come, with stands which are so arranged that the machine can be jacked up without the necessity for exerting great effort. The methods adopted by car designers are out of the question, for they involve considerable weight and an unreasonable amount of complication, but the problem cannot be a very difficult one, for it is only required to raise one wheel at a time of an outfit weighing, say, 5 cwt. at the outside.

What Has to be Done?

In Fig. 1, the line (AB) represents the leg of an ordinary rear stand, 16½ ins. long from the centre of its pivot to the end of the leg. The pivot itself is situated exactly 1½ in. below the wheel centre, and the wheel is 26 ins. diameter. These figures are taken by measurement from a well-known single-cylinder machine, which weighs, all on, some 280 lb. It is evident that, to raise the machine, the stand has to be rotated about the point (B), where it makes

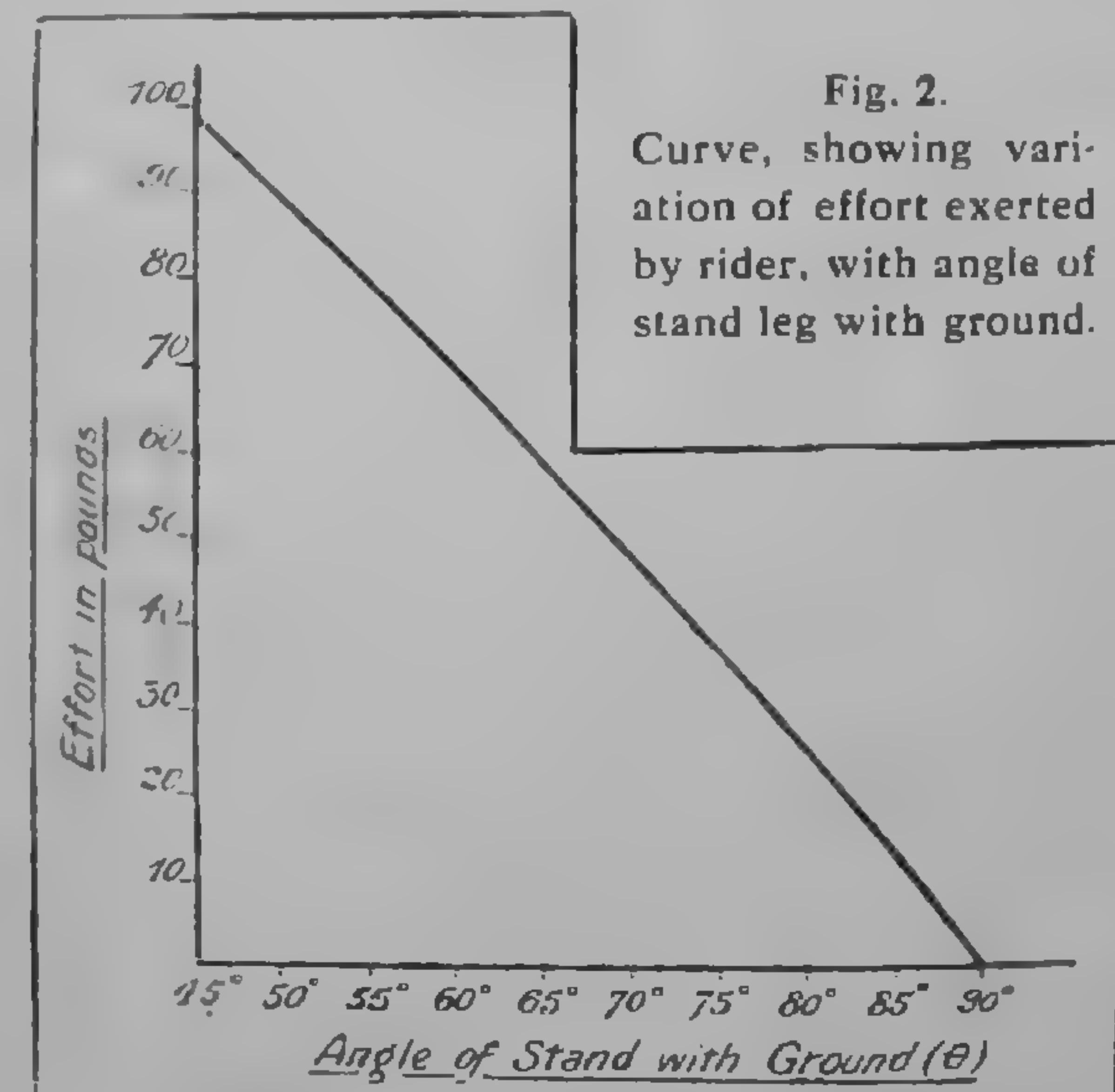


Fig. 2.
Curve, showing variation of effort exerted by rider, with angle of stand leg with ground.

stand leg, that is, in the most effective direction, it is always equal to $W \cos \theta$. But as the machine rises, the angle θ increases, and its cosine correspondingly gets less, so that when, for instance, it reaches 60 degrees the effort required would be only $\frac{1}{2}W$, or 70 lb. In Fig. 2 a curve is plotted which shows how the effort required varies, until at 90 degrees it reaches nothing, except for the slight force required to pull the machine backwards.

Surely matters would be better if the effort could be less at the start, and become greater later on, for once the initial motion is obtained, the machine as a whole would have some momentum, which would help to carry it over the difficult part. As in the case of the kick-starter, we require a large mechanical

The Unsatisfactory Rear Stand (contd.).

advantage to start the motion. As soon as a swing is got on the job, the mechanical advantage may become less without disadvantage. Whether a design can be evolved which will give this desired variation of mechanical advantage we will see later.

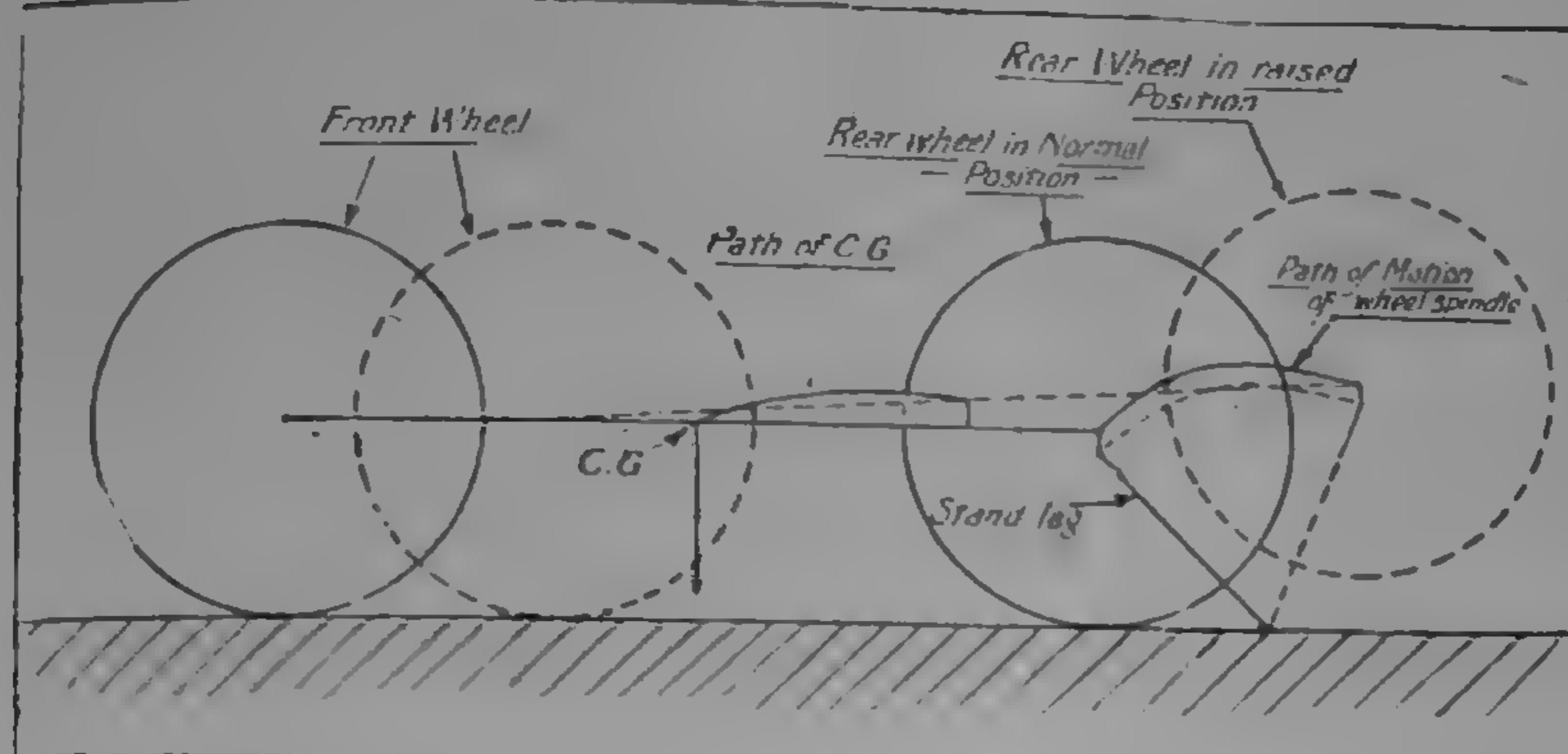


Fig. 3.—Path of motion of centre of gravity when wheel is jacked up.

In Fig. 3 the actual motion of the centre of gravity of the machine has been plotted out, as it is raised on to the stand, working on the assumption that the centre of gravity is situated on the line joining the wheel centres. It will be seen that the weight of the machine is lifted very quickly at first, the speed falling off as the lift continues. This again

shows that the effort required is large at first, and then decreases, and thus confirms the conclusion reached by an examination of the forces acting on the stand itself.

It has many times been suggested that a mere prop to hold the machine up is all that it required as a rule, and this is perfectly true, for only when

tyre or transmission troubles occur is it necessary to jack the wheel clear of the ground. Again, with a sidecar machine the ordinary double-leg stand is a nuisance, for only one leg comes into action if the sidecar wheel is not jacked up as well as the rear wheel, so that severe lateral strains are imposed on the stand. If, therefore, the main stand cannot be improved upon, a single leg which could act as a prop when the machine is used solo, and as a single-leg stand when a sidecar is fitted, would be a convenience, but the ordinary stand would still have to be carried for use if tyre trouble did occur when no sidecar was fitted.

An improved rear stand, however, which would allow the machine to be jacked up without great effort is the ideal solution of the problem, and it seems likely that with the exercise of a little ingenuity a solution can be found. This done, the only real objection to the use of a heavyweight machine will have disappeared, and the necessity for the production of light machines purely on the score of easy handling will have been removed.

D.S.H.

(To be concluded.)

MOTOR CYCLING GIPSY CLUB. Further Applications for Membership.

THE following is a list of applications for membership received after the page, which appears earlier in this issue, had closed for press:—

E.L.L. (Finchley), R.E.D. (Wrotham), H.L.W. (Bedford), S.H.B. (New Cross), J.C. (Birmingham), R.E. (Hull), F.H. (Edinburgh), G.F.H. (Halifax), J.J.H. (Ealing), G.W.K. (Grangetown), S.E.K. (Surbiton), M.L. (Victoria Park), W.G.L. (Woolston), J.H.L. (Stockton-on-Tees), J.F.N. (Peckham), G.M.P. (Cranleigh), A.H.P. (Birmingham), W.B.P. (Dudley), F.K.R. (Wakefield), W.R. (Ossett), D.J.R. (Newcastle-on-Tyne), Mr. and Mrs. T.A.S. (Derby), C.W.T. (Torquay), W.W. (Stockton-on-Tees), F.H. (Larkhill Camp), N.V. (Notting Hill Gate), W.J.H. (Battersea), G.B. (Darwen), G.H.E. (Bagshot), H.R. (Barnsley), T.L.R. (Maida Hill), J.H.W. (Farnham), W.S. (Hampstead Road), C.E.L. (Wood Green), S.C.W. (Birmingham), T.D. (West Ealing), T.C. (Sandwich), J.A.H. (Goldington), H.H. (Redhill).

Owing to pressure on our display advertisement pages the application for membership form on this occasion will be found amongst the "line" advertisements at the end of this issue.

Too late to include with other applica-

tions, which are published in an earlier page, comes the following:—

"I note with great pleasure that you intend reviving the Gipsy Club at an early date. Kindly re-register my name, as my address has been altered since I joined a year or two ago. . . . I am looking very eagerly to the time of the first meeting and shall do my best to attend, and trust the Gipsy Club will again enjoy the success which attended its meetings before the war-cloud became too dark.—H.H. (Redhill).



The buttonhole badge.

Replies to Queries.

T.A.S. (Derby).—You will see that we have registered both as members.

F.H. (Larkhill).—Your letter is sufficient and you are duly registered.

More Musical Societies.

THE Sphinx Manufacturing Co., having noticed our recent notes regarding Midland firms who have organized chairs, advise us that they have been running a concert party for the last two years. This was organized for the purposes of giving entertainment to wounded soldiers and has proved very successful.

Careless Children Again.

A D.R. employed by the Army and Navy Canteen Board at Portsmouth was recently severely injured through being thrown from his motorcycle in endeavouring to avoid a boy who suddenly ran out in the road. The locking of the rear wheel through too sudden application of the brakes was the immediate cause of the accident.

A Suggested System of Forced Lubrication.

A Method Applicable to Engines with Outside Flywheels.

THE lubrication problem to-day is far from settled, and those who are lucky enough to be allowed the use of motorcycles are still dependent to a large extent on the ancient hand-operated plunger pump. Enough has been written at other times of the disadvantages of the above simple but antiquated method of feeding engines with the very necessary oil, and there is no necessity for the point to be laboured here, beyond expressing the hope that the system is doomed.

The accompanying illustrations suggest a method of how the difficulty may be overcome in a fairly simple manner, at the same time ensuring a constant supply of oil being delivered to all bearings. It is as well to note that it is impossible to carry out this idea on any other engine than those having outside flywheels. It will be seen that all the oil is carried in the base-chamber and is circulated through the engine by a gear pump driven from the main shaft either by bevel or worm gearing. This pump is mounted on a plate registering in a hole bored in the bottom of the case, and bolted thereto, thus making the pump readily detachable and leaving a large hole for draining purposes. It is

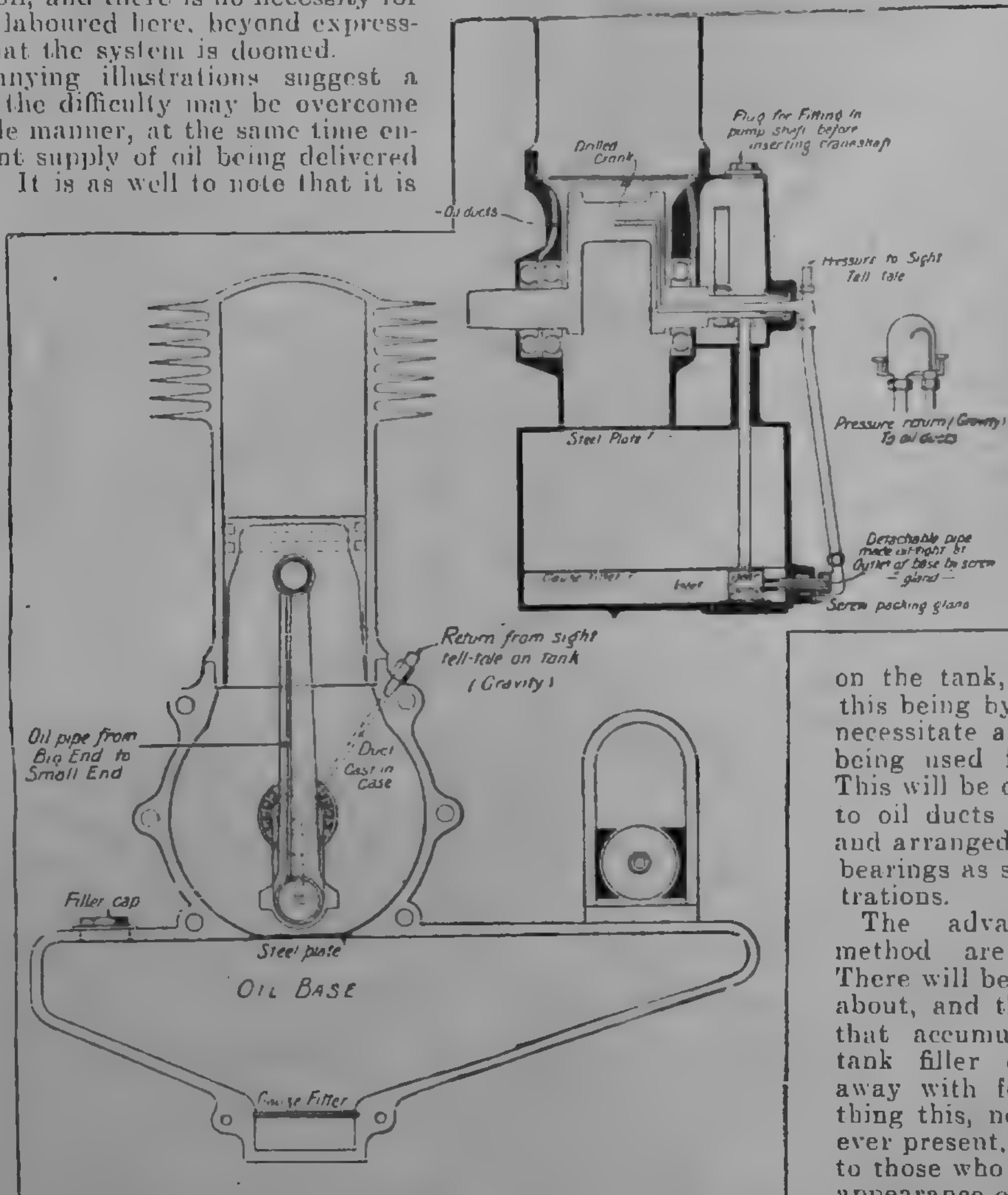
necessary here to explain that the pipe or lead running out of the case from the pump is screwed directly to the delivery side and an oil-tight joint made by an ordinary screw-down gland. As the pipe is stationary, it is unlikely that it would ever leak.

The oil is conveyed to the shaft bearing in the timing cover via an outside pipe, and thence through the hollow shaft to the big-end. A small-bore pipe connects the big-end to the small end, serving to efficiently lubricate the gudgeon pin. Excess of oil will fall back into the base, which is divided off from the crankchamber by a drilled steel plate.

Fitting a union at the shaft end will enable a pipe to be carried to a sight feed

on the tank, the return from this being by gravity. It may necessitate a larger bore pipe being used for this purpose. This will be directly connected to oil ducts cast in the case, and arranged to feed the main bearings as shown in the illustrations.

The advantages of this method are fairly obvious. There will be nothing to worry about, and that horrible mess that accumulates round the tank filler cap will be done away with for ever—a small thing this, no doubt, but it is ever present, and is an eyesore to those who take pride in the appearance of their mounts.



The Next Motorcycle Show.

THE feeling that a motorcycle show should be held early in the spring, rather than late in November, is growing. It has been suggested by many correspondents that as no one has had an opportunity of inspecting the 1919 products of the various manufacturers there is every reason for an early show to be held, for preference before our overseas soldiers return. The Society of Motor Manufacturers and Traders have already decided to organize a full series of exhibitions, and the annual touring car exhibition will be held as usual at Olympia in November, 1919. Other shows which will be organized, but for which dates have not yet been fixed, will be the International Aero Exhibition and the Commercial Vehicle Exhibition.

B24

A.C.U. Membership.

WE understand that since the signing of the armistice a large number of applications for membership have been received.

Dunlop Prices.

MOTORCYCLISTS who have been looking through Dunlop's new retail list of tyres and accessories should make sure that they have received the authorized version, for this reason: By a mishap a few hundred copies of an early edition containing wrong prices were allowed to reach the public, which would naturally lead to confusion between buyer and seller. The folder with the correct charges is printed on white paper; the untruthful one on a dubious buff.

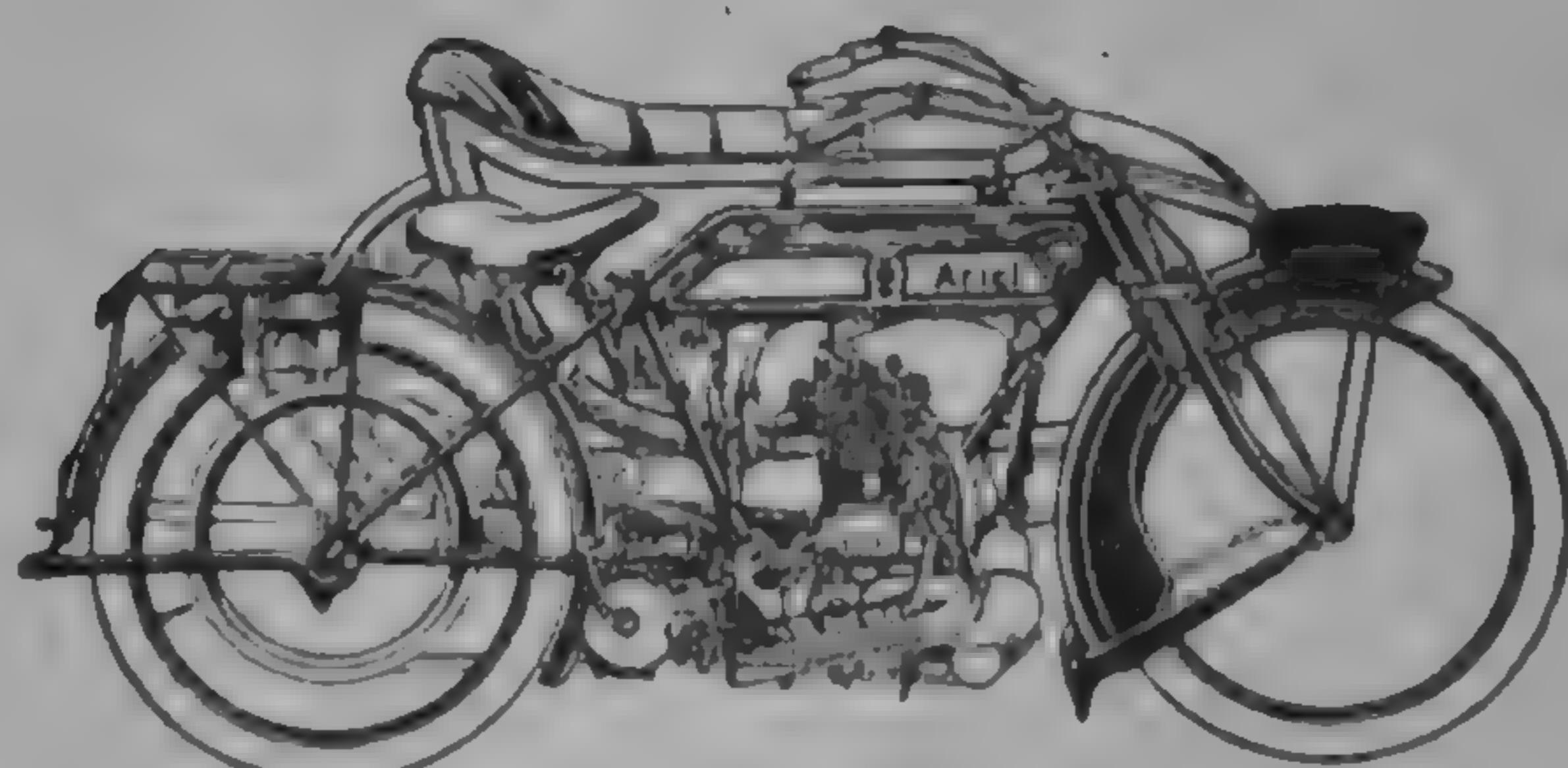


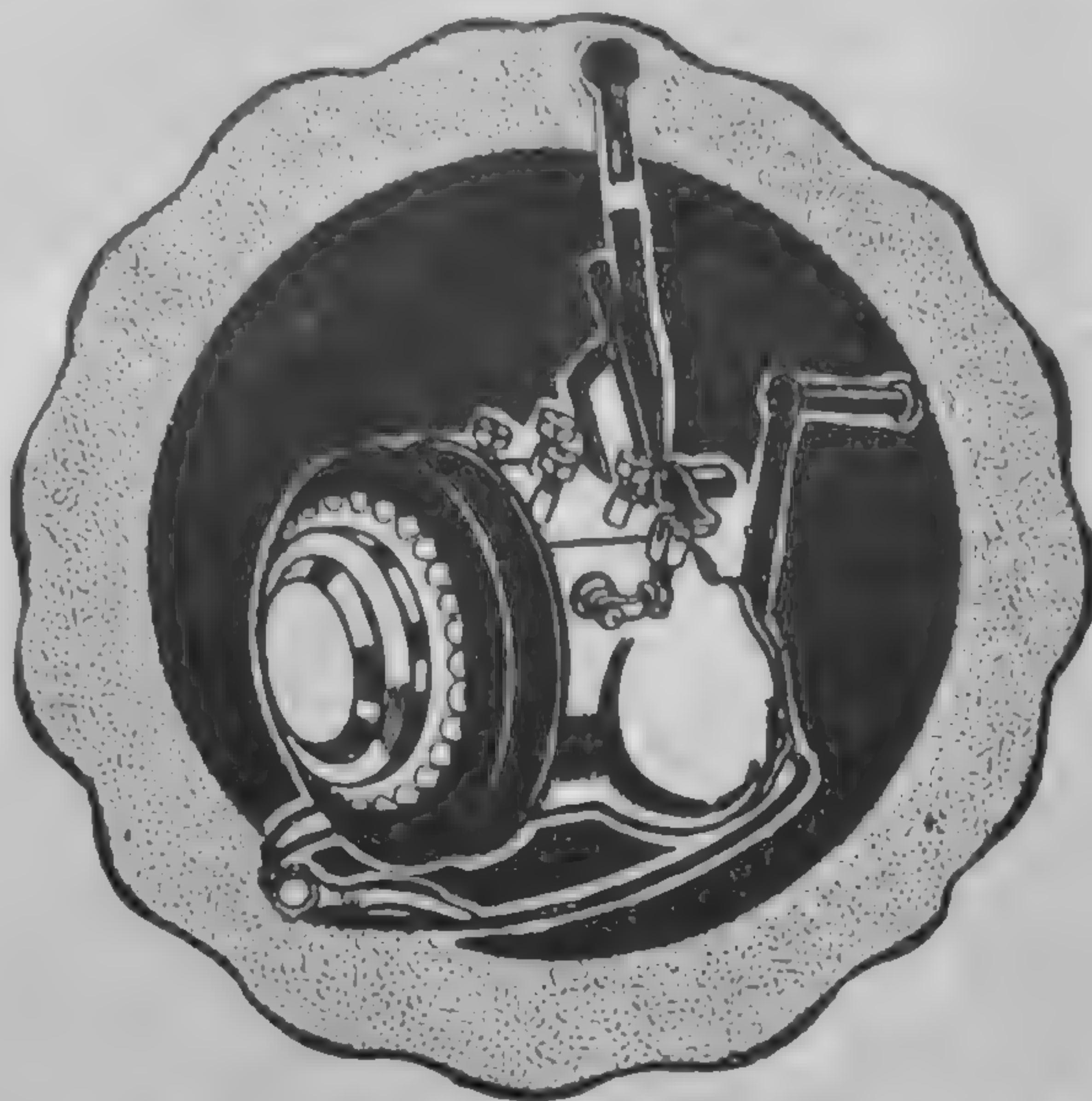
Our service to owners as good as our motorcycle.

We have always striven to make our service organisation as efficient as the Ariel machine. Evidence of our success is provided by the following testimony from an owner in the Midlands:—

“It is extremely kind of you to take so much trouble over a small thing. It is gratifying to know that your service comes up to the general excellence of your products.”

Art Catalogue post free from—
ARIEL WORKS, LTD., 4, Bournbrook, BIRMINGHAM.





On
War
Service
to-day.

At Your
Service
after
the War.

STURMEY ARCHER COUNTERSHAFT GEAR

Sturmey Archer Gears, Ltd., Nottingham.



Photo :
Henri Manuel.

Marshal Foch says

in his published writings on the war, that sureté or security is one of the precedents for a successful offensive. And a successful offensive means Victory.

This dictum may be applied very aptly to the case of tyres. With them security must be assured the purchaser, and security in their case means mileage and freedom from trouble. These are the two outstanding features that should be looked for in tyres, and where they are found the resultant will always be service.

WOOD-MILNE MOTOR TYRES

present the fullest security to the car owner. They are the ideal tyre equipment, the one aim behind their manufacture being service. Their magnificent enduring qualities have won for them unstinted praise and widespread popularity.

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THE EDITOR'S CORRESPONDENCE.

The Editor is not responsible for, neither does he necessarily agree with, the views taken by correspondents. Both sides of any topic are given equal publicity. A pen-name or initials can be given for publication, but the writer's full name and address must always be sent. All communications should be written on one side of the paper only.

Petrol for Christmas.

Can you not use your influence to get the authorities to allow motorcyclists to use their machines during the Christmas holiday, say, for one week before and one week after Christmas, and help to relieve the congestion on the railways? I do not expect them to issue petrol to those that are entirely without, but there are plenty of people that have both petrol and machines stored up that would welcome the chance to travel by road during the holidays. It would not entail any extra work for those responsible beyond issuing orders allowing this concession.

Another point is that hundreds of motorcyclists would take out licences, just for the privilege, which would help the revenue.

It is time the A.A. did something for the members that have paid their subscriptions for four years for nothing.

Oundle, Northants.

The Petrol Restrictions.

The first page of MOTOR CYCLING of 12th November deals with the next T.T. Race. Further on is a letter by "G.W.D." suggesting that if peace is declared before the New Year that those of us who have any petrol, or can obtain any, should celebrate the occasion with beflagged machines, which is an excellent idea. I think most of us have either a petrol licence or a little spirit stowed away somewhere.

Well, the war is practically ended to the great joy of the majority of people. (There are doubtless a few who would like to have seen it continue longer.) Yet I read in the "Daily Mail," 13th November, that there is to be no pleasure riding for some time yet. I hope that MOTOR CYCLING and all motor journals will do all in their power to get the restrictions raised, or at least modified, at the earliest possible moment.

I do not think myself the restriction will be altered for a considerable period unless somebody gets a move on. They are much more easily put on than taken off.

J.W.
Bolton.

The Petrol Turbine.

I beg to thank "Pasadena" for the reply to my criticism, and apparently I must first dispel the delusion that I do not contradict the statement "there is a great saving by the utilization of exhaust and cooling heat" as applied to this turbine. Further, in view of the reply, I am doubtful whether any useful purpose will be served by further discussion, as a regrettable lack of practical knowledge of ordinary engineering materials, and their permissible applications, is displayed.

"Pasadena" now contradicts the statements made in the article, "the power absorbed is negligible" (i.e., by the air-pump), for in the reply we read, "The air-pump does absorb a great deal of the power proportionately." To reconcile two remarks of this nature is, I confess, quite beyond my capabilities. We are also told that the air pump "does not provide the whole of the compression pressure." Will "Pasadena" please say what does? The proposal to use a steam pump, added apparently as an afterthought, is an unnecessary complication. As to its possibility, the mere fact that it is done with large gas engines demonstrates this. At the same time, it is the cycle used in the gas engines which prevents regeneration in any other way. With the petrol turbine other methods are possible.

After my "didactic statements" with reference to the varying velocity of the gas issuing from the nozzles owing to the fluctuating pressures, we are informed that the nozzles act similarly to the de Laval, but constantly changing in form! One has only to consider that the gas will be incandescent to relegate this suggestion to its proper position.

The most alarming statement is that the final expansion and combustion takes place in the vanes. How long these vanes are going to exist as vanes under these conditions "Pasadena" does not say, but may I suggest that the business end of an ordinary domestic fire-poker be closely examined? This is a comparatively solid lump of metal. Now consider the thin (and sharp-edged, if efficiency is desired) blades of a turbine under somewhat similar conditions.

The statement re the friction of the end plate is ludicrous. I have recently had experience of a rotary valve working under a far less temperature than that of the end plate here considered, yet the difficulties of lubrication were very great, resulting in friction, wear and consequent leakage. In a large disc (in proportion to its thickness) as in the case of the end plate and vane plate, warping will play an important part in the decease of the turbine, while unequal longitudinal expansion will append a suitable epitaph.

May I finally point out that the cause of the petrol turbine is not appreciably advanced by useless speculations as to my venerable, or otherwise, personal appearance?

Haslingden, Lancs.

I. N. TEREST.

A Suggested Hill-climb.

Now that peace is nearly here, and the motor-cycling papers full of future trials and competitions, may I be allowed to suggest, through your columns, that a hill-climb or reliability trial, run on the same lines as the Public Schools Hill-climb, be arranged for those fellows who were at public schools, but who left before their time in order to do war work or join the Forces. May I further suggest the ages be between 17 and 20.

No doubt you will agree with me that it is rather hard for this class of fellow, as he is now not eligible for the Public Schools Hill-climb, and he does not stand much of a chance in the big trials. I was at Harrow, but left when 17 to do air-raid warning with my Indian and sidecar, and I am sure there are many others so situated. I should be interested to hear, through the columns of your paper, the opinions of my scheme from those whom it may concern.

London, N.W. 1.

P. V. EAST.

Congestion of Correspondence.

During the past few weeks we have been so overwhelmed with both trade and private correspondence that our staff has been totally unable to cope with it.

May we, through the valuable medium of your columns, ask the patient tolerance of our friends, who may possibly feel we are neglecting them. On the contrary, all correspondence is receiving attention in rotation and being dealt with as expeditiously as possible.

Phillips Street, Aston, P.P. NORTON MOTORS, LTD.
Birmingham. JAS. L. NORTON.

Sidecar Designs.

It was with some astonishment that I read Mr. J. W. Brown's letter in your current issue, and with regard to the question of terms used for expression of sidecar dimensions, I can only suppose that he has deliberately misread the letter in which I criticised his design. My letter needs no explanation to anyone of average intelligence, but I may add that it is a matter of extreme indifference to me whether designers express themselves in inches, feet, mm.'s, cubits or decimal fractions of a milo, if only they will give us plenty of them.

If I did not enter the competition, it was because I believed it to be for original design, whereas, so far there has not been one single attempt at original design published. And I do not mind admitting that I have no such design to offer.

The motor cycling public is still waiting a design which shall be as revolutionary as Mr. Heather's motorcycle. It must be spacious, comfortable, fitted with good locker space, easily accessible from outside, and must have an external form which shall be nothing like the present-day types.

It must have a shape which shall be peculiarly and entirely its own, whereas all these we know to-day are invariably an adaptation of something else, and usually a compromise between a slipper bath, a torpedo, an old boot, a bath chair and a tank.

Let anyone compare the best designed sidecar he has ever seen with the graceful outlines of a yacht, and he will understand.

May I congratulate you upon your issue of MOTOR CYCLING of 19th November? It is amongst the most interesting yet published.

W. ARTHUR LONG (Captain).
Beddington, Surrey.

INFORMATION & ADVICE



LEGAL. TECHNICAL.

RULES:—Questions on technical matters, advice in selection of a new machine, etc., will be answered in the next issue after receipt of the inquiry so far as possible. Letters or postcards must be marked "I. and A." on the top left-hand corner. Questions must be numbered, and a copy kept for reference. Machines upon which an opinion is sought should be numbered. Replies can also be sent by post if a stamped addressed envelope for that purpose is enclosed. Routes and legal queries must be kept separate from others.

C.I. (Northants).—The address you require is as follows:—Messrs. W. J. Green and Co., Omega Works, Coventry.

Lieut. J.T.S. (London, S.E. 23).—The address you require is as follows:—Messrs. F. E. Baker, Ltd., Precision Works, King's Norton.

Master E.W.N. (London, S.E.).—You can obtain a driving licence for a car at the age of 17, and for a Morgan runabout at the age of 14.

W.R. (Lindley).—The address of the London agents for the Jones speedometer is:—Messrs. Markt and Co., 98 100, Clerkenwell Road, London, E.C. 1.

Lieut. T.T.B. (Somerset).—We would suggest that you could not do better than go in for a 2½ h.p. Douglas, which you would find would take a light Watsonian sidecar with ease.

E.C. (London, N. 22).—We much regret that we do not know of the particular type of chassis, and, consequently, cannot give you the information you require. Possibly it was the product of a local maker.

L.S. (Worthing).—(1) You should be able to take a load up to 3 cwt. (2) Yes, it is quite probable that you would get the licence, but with the present change in conditions it is scarcely worth applying for it.

J.W. (Oban).—(1) Apply to the Petrol Control Department, 12, Berkeley Street, London, W. 1. (2) Yes; price 10s. We are sorry to hear of your difficulty in obtaining MOTOR CYCLING, which we are taking up with the wholesalers.

W.D. (Watford).—(1 and 2) Very excellent in its day, but spare parts are now practically unobtainable, and we would not advise its purchase. (3) Its consumption was about 70 m.p.g. (4) No, quite easy to handle solo. (5) You would find "The Art of Driving a Motor Cycle," published at these offices, the book that you require.

J.H.L. (Galashiels).—We do not advise fitting the hub gear that you suggest, inasmuch as it is no longer manufactured, and parts are consequently hard to obtain, besides which the gear is difficult for the local repairers to understand. You would do better to fit either a Philipson pulley or the N.S.U. type of two-speed gear, such as is now made by Messrs. Bradbury and Co., Ltd., Oldham.

E.W.R. (Aldershot).—(1) You will find this machine very satisfactory, but we certainly suggest the fitting of a sidecar in preference to pillion riding, which we consider most dangerous. Personal use has failed to disclose any tendency to overheat. (2) The 5-6 h.p. machine you mention was very satisfactory, but it is not being made at the moment, although the concern is likely to recommence in the immediate future. (3) n. c. e. d. b. (4) No, a very unfair criticism, and there are at least two other machines of similar manufacture which are certainly as reliable as the one you quote. (5) We should go in for (a).

S.G.P. (Inverness-shire).—(1) You had best advertise your bicycle in the columns of "Cycling," and place the money thus obtained against the purchase of a motorcycle. (2) Yes, either of the two machines you mention would be eminently satisfactory. We would recommend the first for preference. (3) Yes, the lightweight Canoclet made by Messrs. Mead and Deakin, Rudy Lane, Tyeeley, Birmingham. (4) Yes, you had better purchase through a dealer, who would doubtless be able to give you many useful hints when you take the machine over. (5) No, this is a fair price as prices rule to-day. (6) This question is answered above. (7) The dealer from whom you purchase would probably give you the necessary instruction.

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COAL-GAS. PURCHASE.

W.F. (Hyde).—(1) You should get 70 to ■ m.p.g., dependent upon the nature of the country. (2) Uncertain on this point, but fancy it was petrol system. (3) Yes, simple and reliable. (4) Dependent on the weight of the passenger, but 1 in 9 for short distances should not be too much. (5) We should take the latter-mentioned machine, inasmuch as the firm responsible for it has specialized in this particular model.

The Rev. P.S.D. (B.E.F.).—We would suggest that you sell your present machine immediately, and think it likely that you can select your new mount from one of the stocks, details of which we give in our issue of the 26th ult. We regret it is impossible to send you the catalogues you require, as during the period of the war we have had to give up stocking these owing to the paper restrictions. If you would like us to place the machines you select in order, it would be as follows:—2, 1, 3.

S.P. (Crayford).—We would advise you to get a good single-cylinder machine, such as the 4½ h.p. countershaft gear Triumph, the 6 c.c. James, or the Big Four Norton. Any of these would be quite capable of the load you quote, would be simple to understand and cheap to use. It is impossible to quote a second-hand price; you can best get some idea of this by studying the second-hand columns. We would certainly advise purchasing now, as, undoubtedly, as soon as petrol is released prices will go up.

A.T.W. (London, N.W. 7).—(1) The Quadrant is made by the Quadrant Cycle Co., Ltd., Lawley Street, Birmingham. (2) Yes, well made and reliable. (3 and 4) The only objection we find is the hub gear. This was fairly reliable, but there is now a certain amount of difficulty in obtaining spare parts, as well as finding repairers who really understand its mechanism, and while the machine you write about would be quite suitable for the service you mention, we consider that you would do better to purchase a motorcycle with a countershaft gear.

Pte. S.T.H. (Northumberland).—(1) You would find the 7 h.p. Indian a thoroughly satisfactory machine. (2 and 3) No, this model has now been dropped. (4) Certainly; rumours to the detriment are not justified, and are probably prompted by jealousy. (5) Yes, you would get thoroughly satisfactory service from it. (6) Either the A.J.S. or Enfield. (7) Try E. Broadbent, of the Manchester Northern Supply Co., Deansgate, Manchester. (8) Second-hand prices are so dependent upon the condition of a machine that we never attempt to give advice. (9) If this model had been procurable you would have found that you could get from 65 m.p.g. to 70 m.p.g. solo, and about 55 m.p.g. with sidecar.

J.M. (London, E. 13).—(1) We never care to quote second-hand prices without examination of the machine, but inasmuch as this is not a prominent make, we should not value it at more than £22 to £25. (2) Possibly, providing the sidecar was a very light model and the passenger a lightweight. (3) We do not advise a gear of this type, and would suggest that you would find a Philipson pulley more suitable. (4) (a) 80 m.p.g.; (b) ■ m.p.g. (5) Apply for your licence at the London County Council offices, 19, Charing Cross Road, W.C. (6) A driving licence costs 5s.; Inland Revenue tax, £1; and the registration of numbers, 5s. (7) You will see an announcement on this point in our issue of the 26th November. (8) The Brown motorcycle is marketed by Messrs. Brown Bros., 12-34, Great Eastern Street, E.C. 1.

Sunbeam Motorcycles and the War.

THE conditions under which Motorcycles work at the Front are very difficult, and the strain Engines and Transmissions are called upon to bear is enormous.

Sunbeam Motorcycles are known as the Motorcycles with Perfect Power Transmission, and large numbers of Sunbeams are in use by the Allied Governments.

In the early days of the War thousands of Sunbeam Motorcycles were supplied for use in Russia. In snow and ice and over desert tracks these Sunbeams did good service. Wherever the conditions are so severe as to be almost impossible for Motor Vehicles Sunbeams are used.

8 h.p. Sunbeams and Sidecars are employed with the French Army in the Vosges Mountains, where it was thought, prior to the advent of the Sunbeam, that Motorcycles were impracticable for this work.

WHEN the time comes that Sunbeam Motorcycles can again be supplied to the general public, it may be a source of Satisfaction for you to remember that your name is on their Waiting List.

The Catalogue will be sent you now on application to—

JOHN MARSTON, LTD.,
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London: 57, Holborn Viaduct, E.C. 1. 157 and 158, Sloane Street, S.W. 1.



AFTER WAR

Hendian
MOTOCYCLES

will be worth waiting for.

WE are not prepared at the present moment to announce new models or state prices and deliveries. But as soon as we can do so due notification will be made in this paper.

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London, N.W. Telephone: Museum 1643
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AUSTRALIA, 109-113, Russell Street,
Melbourne. AFRICA, Indian House,
127-9, Commissioner St., Johannesburg.
Indian House, 579, West Street, Durban.
Indian House, Strand St., Port Elizabeth.

MOTOR CYCLING MART

NOTICES.

"MOTOR CYCLING" is published in London every Tuesday morning.

HEAD OFFICES—7-15, ROSEBERRY AVENUE, LONDON, E.C. 1. Telephone—Holborn 5292 (four lines). Telegrams—"Motor Cycling, Phone, London."

MIDLAND OFFICES—9 & 10, Burlington Chambers, New St., BIRMINGHAM. Telephone No. 2498 Midland. Telegrams—"Presswork, Birmingham." 6, Warwick Row, COVENTRY. Telephone No. 983 Coventry. Telegrams—"Presswork, Coventry."

NORTHERN OFFICES—196, Deansgate, MANCHESTER. Telephone No. 2467 Central. Telegrams—"Presswork, Manchester."

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of all kinds are inserted in this Section at 17s. Od. per inch, single column. Terms for a series or for larger spaces on application.

MOTOR-BICYCLES.

—**A.J.S.** For the earliest possible delivery of 1919 models, advance specifications and super service, try the A.J.S. specialists, The Walsall Garage, Wolverhampton St., Walsall. Phone 444. 484-278

—**A.J.S.** Earliest possible delivery 1919 models; orders executed in strict rotation. Rider Troward and Co., 31 High St., Hampstead. 473-338

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—**ARIELS.** Earliest possible deliveries 1919 models; orders executed in strict rotation. Rider Troward and Co., 31 High St., Hampstead. 473-338

—**BRADBURY** and sidecar, 1913, 4hp, 2-speed gear, perfect order, not used since 1914, recently overhauled, 1918 carburettor, £32. Preston Station St., Huddersfield. 473-1774

—**BRADBURY**, 4hp, N.S.U. 2-speed, free engine, Bosch magneto, with sidecar, lamps, horn, seen running, bargain, £28 10s.; exchanges entertained. 1 Gunnersbury Lane, Acton Hill, London. 473-1774

—**BROWN.** 3½hp, spring forks, 28 by 2½in. wheels, adjustable pulley, good condition, £17. Percy, 121 Romford Rd., Stratford, E. 15. 473-4711

—**BROWN-VILLIERS.** 2 stroke, 1915, 2½, single speed, Miller's lamps, horn, Jones speedometer, new Dunlop belt, 1 new Dunlop tyre, recently overhauled, £20, bargain; seen any time. Latter's Boot Store, Abbey Wood, S.E. 473-6713

—**B.S.A.** For the earliest possible delivery of 1919 models, advance specifications and prices, sole district agents, The Walsall Garage, Wolverhampton St., Walsall. Phone 444. 484-278

—**B.S.A.**, 1919 model K, delivery from stock, 76 guineas. D. J. Shepherd and Co., Enfield Highway. 473-311

—**B.S.A.**, 1913, 3½, 2 speeds, with sidecar, in excellent condition, £35. 47 Streatham Hill, S.W. 2. 473-360

—**B.S.A.** Immediate delivery ex-stock 1919 models; no permit. Rider Troward and Co., 31 High St., Hampstead. 473-334

—**CALTHORPE** motorcycles. All models in stock for immediate delivery; no permits required. P. J. Evans, John Bright St., Birmingham. 222-10

—**CALTHORPE**, 1916, 2-stroke, lamps and horn, splendid condition, £30. Parker and Son, St. Ives, Hunts. 473-357

—**CALTHORPE**. Immediate delivery 1919 models, including 4½hp combination; no permits. Rider Troward and Co., 31 High St., Hampstead. 473-335

—**CALTHORPE-J.A.P.**, 1915, 2½hp, 2-speed, free engine, fitted with lamps and tools, had little use and in splendid condition, £25. H. Sherman, Decorator, High St., Southall. 473-6740

—**CALTHORPE-J.A.P.**, early 1917, 2½hp, free engine, Enfield 2-speed gear, E.I.C. magneto, Jones speedometer, lamps, horn, accessories, plating, enamelling all new, tyres good, perfect running, £30, or offer; Saturday after 1 o'clock. Manor Park Rd., Harlesden, N.W. 10. 473-6780

—**CONNAUGHT**, 1915, 2-stroke, A.M.A.C. carburettor, spring forks, 26 by 2½-in. tyres, excellent condition, bargain, £18. Maude's, 100 Gt. Portland St., London, W. 1. 473-331

—**CONNAUGHT**, 1915, 2-stroke, 2-speed, lamps, etc., £22. 51 Maplethorpe Rd., Thornton Heath, S.E. 17. 473-6772

—**DOUGLAS** motors. Send your name for waiting list now to Gibb, Douglas Expert, Gloucester. Phone 852. 504-460

—**DOUGLAS.** Best deliveries of 1918 models, also spares, by the man on the spot. Eli Clark, The Pioneer Agent, Wholesale and Retail, Cheltenham Rd., Bristol. 222-364

—**DOUGLAS**, 1915, 2½hp, 2-speed, £40. Elce and Co., 15-16 Bishopsgate Ave., Camomile St., E.C. 3. 473-314

—**DOUGLAS**, 1915, 2½hp, 3 speeds, clutch and kick-start, Hutchinson tyres, Dunlop belt, not done 500 miles and equal to new, £52. Maude's, 100 Gt. Portland St., London, W. 1. 473-330

—**DOUGLAS**, 1914, 2½hp, 2 speeds, £30; wanted, combination. Chapman, 26 Highbridge St., Waltham Abbey. 473-6789

—**ENFIELD**, 1919 model, 3hp, delivery from stock. D. J. Shepherd and Co., Enfield Highway. 473-310

—**ENFIELD**, 1915, 3hp, 2-speed, not used for 12 months, splendid condition, £40. Parker and Son, St. Ives, Hunts. 473-350

—**ENFIELDS.** Earliest possible deliveries 1919 models; orders executed in strict rotation. Rider Troward and Co., 31 High St., Hampstead. 473-336

—**HARLEY-DAVIDSON** 1916 electric combination, Watsonian sidecar, £120. Morris, 58 Devonshire Rd., Liverpool. 474-6706

—**HARLEY-DAVIDSON**. Always a good selection of fully-guaranteed second-hand machines. Nottbeck, Harley-Davidson Specialist, 37 Turnham Green Ter., W. 1. 473-362

—**HARLEY-DAVIDSON** 1917 electric combination, with Swan sporting sidecar, £128; similar standard combination, but with magneto, £125. 1917 magneto model, with coach-built sidecar, £127. Maude's, 100 Gt. Portland St., London, W. 1. 473-323

—**HARLEY-DAVIDSON** 1917 electric combination, scarcely used, 3 electric lights, with dimmer, J horns, magnificent roomy sidecar, with recess at back for 3 2-gal. tins petrol; this combination was illustrated in the motor-cycling papers as a magnificent combination de luxe, lowest price £110. Addressee, Rusty House, Burton Joyce, Notts. 473-6775

All Advt. orders are subject to confirmation in writing from the Head Offices.

All Advertisements and Contracts are accepted and made upon the express condition that the Publishers have the absolute right to refuse to insert copy to which they may object for legal, public or trade reasons, and such refusal of copy shall not be a good ground for advertisers to stop a current contract or to refuse to pay for the same or for taking action for breach of contract. Advertisements received too late for insertion in the issue then closing for press will—unless accompanied by express instructions to the contrary—be inserted in the following issue. Whilst every precaution is taken to ensure accurate printing, the Publishers will not be responsible for 'printers' errors, nor will they be responsible for advt. blocks that are left in their possession for more than one year.

All Communications respecting "Advertisements" must be addressed to "The Manager," "MOTOR CYCLING," 7-15, Rosebery Avenue, London, E.C. 1.

Advertisers desiring to have replies sent care of "MOTOR CYCLING" may do so on payment of a nominal fee of 6d.

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—**HARLEY-DAVIDSONS.** Our contract for the post-war models has now been fixed many months; come to us for earliest possible deliveries; orders executed in strict rotation. Rider Troward and Co., 31 High St., Hampstead. 473-337

—**HUMBER** combination, 1914, 3½, 3-speed, in first-class condition, £45. 47 Streatham Hill, S.W. 2. 473-361

—**HUMBERS.** Our post-war contracts now fixed; we can accept orders for the 3½hp twin and the 6hp combination; orders executed in strict rotation. Rider Troward and Co., 31 High St., Hampstead. 473-347

—**INDIAN**, 1915, 7-9hp, guaranteed thoroughly overhauled, runs equal new, £45. Exchanges with pleasure. Palmer's Garage, Tooting. 481-149

—**INDIAN**, 7-9hp, 1914, late model, as new, £45; appointment only. Miss D. Minns, Mayall Rd., S.E. 24. 473-316

—**INDIANS.** Our contract for post-war models has been fixed many months; come to us for earliest possible deliveries; orders executed in strict rotation. Rider Troward and Co., 31 High St., Hampstead. 473-340

—**INDIAN**, 1916, Powerplus, sporting sidecar, grand turnout, £80. 51 Maplethorpe Rd., Thornton Heath. 473-6773

—**JAMES**. Immediate delivery all models without permit. 5-6hp combination, £104; 4½hp combination, £99. Rider Troward and Co., 31 High St., Hampstead. 473-341

—**JAMES** 4½ combination, late 1916, every modern improvement, perfect condition, genuine bargain, petrol, £68, or near offer. H. M. G., Wellin Crescent, Harrow. 473-1779

—**JES** auxiliary, 1½hp, almost new, ah complete, £10. G. E. Borwick, Craig Wood, Windermetre. 473-359

—**KERRY-ABINGDON**, 3½hp, good running order, new Dunlop tyre on back wheel, £23. Parker and Son, St. Ives, Hunts. 473-359

—**LEVIS.** For the earliest possible delivery of 1919 models, advance specifications of all models. Sole district agents, The Walsall Garage, Wolverhampton St., Walsall. Phone 444. 484-280

—**LEVIS**, 1915, Popular, 2½hp, £15. Elce and Co., 15-16 Bishopsgate Ave., Camomile St., E.C. 3. 473-313

—**LEVIS**, 1915, Popular model, Druid forks, A.M.A.C. carburettor, Dunlop tyres, A.K. knee-grips, £22. Maude's, 100 Gt. Portland St., London, W. 1. 473-329

—**MATCHLESS**. Shp, war model, 3 speeds, kick-start, 3 lamps, Lucas horn, Stewart speedometer, detachable wheels and spare, £115; another, 1912, single-speed combination, £23. Maude's, 100 Gt. Portland St., London, W. 1. 473-325

EASTERN GARAGE

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— **MATCHLESS** war model combination, with spare wheel and tyre, £140; seen by appointment. J. Tassell, 1a Bloombeld Rd., Plumstead, S.E. 18. 475-4612

— **NEW HUDSON**, 1915, 2 stroke, T.T. base, Dixie magneto, B. and B. carburettor, Dunlop tyres, £20. Maudes', 100 Gt. Portland St., London, W.1. 473-327

— **NEW HUDSON**, late 1914, 3½-hp, 3-speed, free engine, sidecar and tools complete, £33; any time after 7 p.m. 81 Shenley Rd., Camberwell, S.E. 1. 473-4749

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— **O.K. JUNIOR**. Our post-war contracts now being fixed; we can give earliest possible delivery; orders executed in strict rotation. Rider Troward and Co., 31 High St., Hampstead. 473-348

— **OMEGA**, 1916, 3hp, 2-stroke, 2-speed, lamps, horn, etc., new condition, accept £23, bargain combination wanted. 436 Whitehorse Rd., Thornton Heath, S.E. 473-373

— **P. and M.**, 1914, 3½-hp, 2-speed and kick-start, complete with lamps, horn, wicker sidecar, in excellent condition, £60; another, solo, but being overhauled, £50. Maudes', 100 Gt. Portland St., London, W.1. 473-321

— **REX** 6hp powerful twin combination, mechanical valves, Bosch magneto, 2-speed, handle start, beautiful turnout, £28; exchanges entertained. Speechley, 1 Gunnersbury Lane, Acton Hill, London. 473-370

— **ROVER**, 1912, 3½-hp, clutch model, little used, every part guaranteed in perfect order, any reasonable trial given, £24; wanted, powerful combination, any condition. Kennedy, Woodville, Hills Rd., Cambridge. 473-878

— **RUDGE**, 3½, 2 speeds, clutch, splendid condition, £23, bargain. Saunders, Westbury Lodge, Luckhurst Hill, Essex. 474-267

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— **TRIUMPH**, 1914, 3½-hp, 3-speed, lamps, horn, exceptionally good condition, £42. Elce and Co., 15-16 Bishopsgate Ave., Camomile St., E.C.3. 473-312

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We will send a complete list to all enquirers.

ALLON , 1916, 2½ h.p., two-stroke	£30
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DOUGLAS , 1917, 2½ h.p., Admiralty model, lamps and horn ..	£60
HARLEY-DAVIDSON 1915, 7.9 h.p., combination, dynamo lighting set, horn, speedometer ..	£75
JAMES , 1916, 2½ h.p., two-stroke, two-speeds, lamps and horn ..	£30
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PREMIER , 1918, 2½ h.p., two-speed, countershaft gear, and coachbuilt sidecar ..	£38
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— **CALTHORPE-J.A.P.**, 1915, 2½hp, 2-speed, Enfield gear, just re-enamelled, 28 guineas. (36)

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— **DOUGLAS**, 1913, 2½hp, 2-speed, T.T., just re-enamelled, fine order, 34 guineas. (33)

— **DOUGLAS**, 1915, 2½hp Colonial model, 3-speed, T.T., 42 guineas. (37)

— **E.L.F.**, 1914, 1½hp, genuine lightweight, been stored since 1915, as new, 11 guineas. (28)

— **ENFIELD**, 1916, 3hp, twin, Enfield 2-speed, kick, clutch, semi-T.T., as new, 40 guineas. (35)

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— **PREMIER**, 1911, 2½hp, clutch model, B. and B., Bosch magneto, fine condition, 27 guineas. (30)

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— **SUN-VILLIERS**, 1915, 2½hp, 2-speed, 2-stroke, B. and B., 26 guineas. (13)

— **SINGER** combination, 1914, 4hp, 2-speed, countershaft, clutch, coach sidecar, splendid condition, 36 guineas. (26)

— **SUNBEAM**, 1914, 3½hp, 3-speed, kick, clutch, machine is as new and unscratched, 59 guineas. (22)

— **TRIUMPH**, 1913, 3½hp, genuine T.T. model, very fast and in good condition, 29 guineas. (27)

— **TRIUMPH**, 1914, 3½hp, 3-speed, clutch, complete with all lamps, 42 guineas. (33)

— **VELOCETTE**, 1915, 2½hp, 2-stroke, 2-speed, open frame, all-chain drive, 24 guineas. (19)

— **WOLF-J.A.P.**, 1916, 2½hp, 2-speed, kick-start and hand clutch, renovated, as new, 29 guineas. (25)

— **ZENITH-GRADUA**, 1914, 6hp, Gradua gear, Bosch, B. and B., splendid order, 49 guineas. (8)

— **ZENITH-GRADUA**, 1914, 3½, T.T. model, Bosch, B. and B., very fast machine, 30 guineas. (22)

— **ZENITH-GRADUA**, 1911, 6.8, T.T. model, just overhauled and renovated, Bosch, 43 guineas. (23)

— **ZENITH-GRADUA**, 1914, 3½hp, late model, complete with lamps and horn, 33 guineas. (24)

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— **DOUGLAS**, 1914, 2½hp, special 1.O.M. T.T. model, wide tank, 26 guineas. (13)

— **JAMES**, combination, 1918, 5-6hp, new machine, 3-speed e.s., de luxe sidecar, £101. (41)

— **MOTOSACOCHE** combination, 1916, 3½hp, Enfield 2-speed, air-cooled valves, Watsonian lightweight sidecar, 59 guineas. (42)

— **DOUGLAS**, 1911, 2½hp, 2-speed, T.T. model, just renovated, as new, 39 guineas. (38)

— **THE H.C. MOTOR CO.**, 347 Finchley Rd., N.W.3, Phone, Hampstead 4631. Open Saturday afternoons and Sundays. 473-317

— **2½ LEVIS**, Popular, 1916, H.I.C., speedometer, T.T. bars, £18 16s.; also Ivy 2-stroke, U.H., footboards, £20; no offers; both in splendid condition; no dealers. Clarke, Tankersley, Millford, near Farnham, Surrey. 473-4713

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— JONES'S GARAGE. 1915 7hp 3-speed Indian, in fine condition and like new, Model C, kick-start, date guaranteed accurate. Broadway, Muswell Hill.

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MISCELLANEOUS.

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(Continued on top of column three.)



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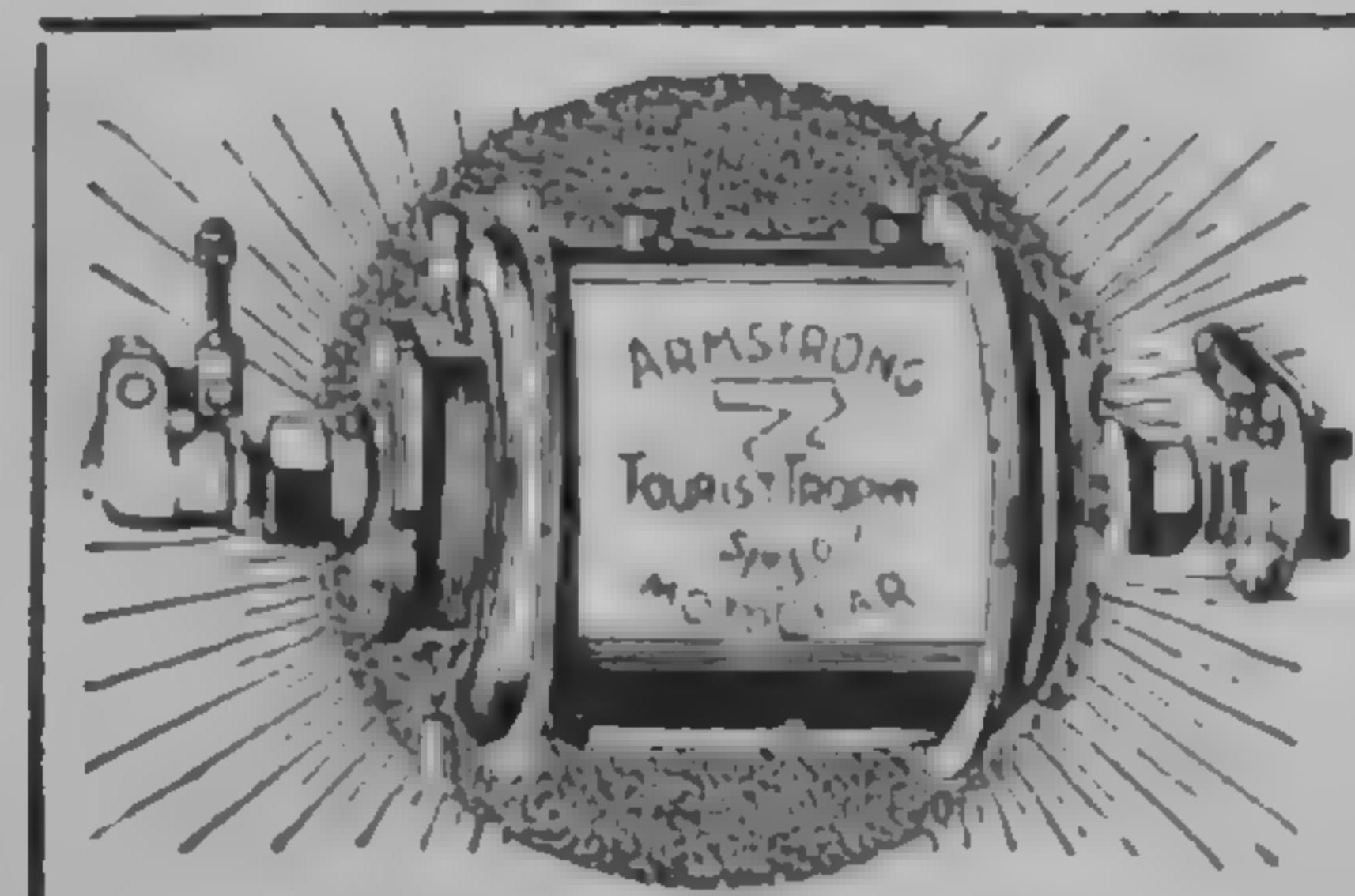
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—BOSCH Z.A.V. 60-degree magneto. The Ruubaken Magneto Co. Ltd., Cheetwood Lane, Derby St., Manchester. zzz-92

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No. 7, 3½hp James, twin solo model, 3-speed, kick starter	79 0
No. 9, 5-hp James, twin-cylinder, 28 by 3 tyres, countershaft 3-speed gear, chain drive, hand-controlled clutch, kick starter	110 0
No. 9, 5-hp James, twin-cylinder, 3-speed, kick starter, with coachbuilt sidecar and apron	105 10
2hp War Model Matchless combination, J.A.P. engine, spring forks, countershaft 3-speed gear, silent chain drive, patent quick detachable wheels, including spare wheel, 3-in. tyres on all 4 wheels, kick starter	140 0
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5700, 1916, 2½hp Calthorpe, J.A.P. engine, Enfield 2-speed gear, chain-cum-belt drive	35 0
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5687, 1917, 3½hp B.S.A., brand new, T.T. model D, belt drive	55 0
5735, 1917, 3½hp Zenith, twin-cylinder, J.A.P. engine, Gradua gear, clutch and kick starter, bolt drive	58 0
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5752-3, 1916, Model F, 7hp Indian, Powerplus, twin cylinders, 3-speed countershaft gear, foot and hand-operated clutch, spring frame, kick starter, lamps, horn, and coach-built sidecar	115 0
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1916 Calthorpe Minor, 4-seater torpedo, fitted with one-man hood, double folding screen, side curtains, cover for back seats, 6 Dunlop wheels, 710 by 85 Pinner cord-tyres, electric side and tail lamps, electric horn, speedometer, body painted grey, black wings, in perfect order throughout	100 0
Every Second-hand Machine is thoroughly overhauled before delivery, and replacements made where necessary.	
All Second-hand Machines are supplied complete with Inflator, Tool Bag and Tools.	
These Machines are only offered subject to being unsold on receipt of Deposit.	
Where Accessories are not included, we are prepared to supply a brand new Lamp and Generator, also Horn, for the special price of 30s. Rear Light complete with Y piece and Tubing 7s. 6d.	
Full Specification of any Machine on request.	

(Supplement vii.)

HENDERSON, 10-12tho, and sidecar, 1915, or later. Long, 21 Guy Rd., Beddington, Croydon. 722-276

RIDER TROWARD and CO., 31, 40b and 78 High St., Hampstead, are open to accept high-class machines for sale on commission, no sale, no charge, 5 per cent. on proceeds; free collection, garage, cleaning, advertising and insurance. Write before sending. Quick sales effected. 473-350

HARLEY-DAVIDSONS wanted for cash. Henry Notbeck, 37 Turnham Green. 673-353

RIDER TROWARD and CO., 31 High St., Hampstead, are open to purchase for cash any modern motorcycle. 473-353

THE H.G. MOTOR CO. require good combinations and solo machines for cash; send or bring your machines to us; cash offer made on sight. H.G. Motor Co., 347 Finchley Rd., N.W. 3. 473-318

THE H.G. MOTOR CO. can take a few good motorcycles and combinations for sale on commission; 5 per cent. only charged when sold; no other charges. Write for full particulars. The H.G. Motor Co., 347 Finchley Rd., N.W. 3. 473-319

WANTED, motorcycle, or Morgan, must be perfect. 97 Sheffield Rd., Barnsley. 2 473-271

WANTED for cash, any make motorcycle or combination. Please send full particulars, date, price, time viewed, will call with cash if right price. Speeley, 1 Gunnersbury Lane, Acton Hill, London, W.3. 473-271

COMBINATION, Douglas or other reliable make; state full particulars and where viewed. Hudson, Hookhouse Farm, Outwood, Redhill, Surrey. 473-272

WANTED, for 7-9 Indian, 1915 kick starter, also Binks 3-jet carburettor. Green, 72 Victoria Rd., Barking. 473-274

WANTED, combination in exchange for City Life House Purchase policy, over 5 years paid, about £36; cash adjustment either way. Thompson, 25 Davyville Rd., Shepherd's Bush. 473-2716

WANTED, "Secrets of Tune," 6d.; "Art of Driving a Motorcycle," 1s.; full price paid if in good condition. Box No. 4570, c/o "Motor Cycling." 473-2740

WANTED, 2½hp F.N., cheap, small repairs not objected to. Lt. W. Hughes Stockdale, Schools of Instruction, Bovington, Dorset. 473-2751

WANTED, gent's Dursley-Pedersen, must be good order. Lt. W. Hughes Stockdale, Schools of Instruction, Bovington, Dorset. 473-2752

WANTED, modern motorcycle, damaged or otherwise, cheap for cash; no dealers. 14 Broadgreen Rd., Liverpool. 473-2753

WANTED, rear axle for 1911 Humber motorcycle. J. c/o "Motor Cycling." 473-2756

WANTED, motorcycle, Allon, 2-stroke preferred. 116a High St., Fulham. 473-2758

WANTED, motorcycle combination, 4½ countershaft gear, Triumph or 600 c.c. James, good condition most essential. Potts, 31 Maiden Lane, Crayford, Kent. 474-2759

WANTED, A.J.S., Enfield or Sunbeam combinations for cash. Motor Exchange, 18a Union St., South Shields. 473-2763

WANTED, motorcycle, about 5hp, countershaft, kick, must be cheap. Full description, accessories, etc. Daw, 14 Cowper Rd., London, W.3. 473-2765

WANTED, modern combination; can view only on Wednesday afternoons or Sunday. Write particulars and price. Simmonds, 11 Grant Rd., Croydon. 473-2766

WANTED, Enfield or other first-class combination, will call with cash on receipt of card. 51 Maplethorpe Rd., Thornton Heath. 473-2770

A.J.S., Matchless, Harley or similar wanted at once. Hayes, c/o Mr. Pomeroy, Chemist, Thornton Heath, S.E. 473-2771

WANTED, motorcycle with sidecar, about £35, in exchange for Broadwood semi-grand piano, excellent condition. Ford, 153 Gray's Inn Rd. 474-2779

SITUATIONS VACANT.

Defence of the Realm Act

REGULATION 8 (b).

Under the above regulation, advertisements offering situations with firms whose works are situated within 30 miles of London and whose business consists wholly or mainly in engineering, shipbuilding, or the production of munitions of war, or of substances required for the production thereof, must contain the words:—"NO PERSON ENGAGED ON GOVERNMENT WORK OR RESIDENT MORE THAN 10 MILES DISTANT NEED APPLY."

When the advertiser's works are situated more than 30 miles from London all applications must be made through a Labour Exchange, by means of a box number allocated by the Board of Trade. Forms of application may be obtained from any Labour Exchange, or from the offices

The Post War

N·U·T
NEWCASTLE — UPON — TYNE

Whilst we cannot give deliveries at the moment of our Post-War Model, at all events it will prove a good and also a dear. In pre-war times the N.U.T. Motorcycle carried off the leading honours on road and track, and now that the war is over we can assure our patrons we shall not be content to rest on our laurels.

Details on application.

The Newcastle-upon-Tyne Motor Co., Ltd.,
South Benwell — Newcastle-upon-Tyne.

TWINKO
is the new
non-abrasive
hand cleanser.
Antiseptic,
deodorant and
hygienic.

*Never mind the Dirt
TWINKO will remove it.*

WHEN you find your hands getting rough and grimy don't worry, there's always Twinko. It cleans hands in a twinkie. It removes the most obstinate grime and dirt without irritating the skin; so don't make your hands rough by scrubbing them.

For motor drivers, cyclists, munition workers, housekeepers, farm or garden workers.

JUST dip the hands into cold or warm water, sprinkle a little Twinko on them and rub thoroughly for a minute or two, allowing Twinko time to act, then rinse. Your hands will be clean and white.

IN DREDGER TINS, 7½ D.



Sold by all
leading Chemists,
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TWINKO.
Clean Hands in a Twinkle.

VINOLIA COMPANY LIMITED. LONDON-PARIS.

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WHITE CROSS
MOTOR CYCLE INSURANCE

Maximum Benefits,
Minimum Terms,
Reduced Premiums
for Motorcycles
from £1 : 7 : 6
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ASSOCIATION, LIMITED.
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And Branches.

HOBART

MOTOR-BICYCLES

FOR the present, the HOBART Works are fully engaged on War Service, consequently the manufacture of HOBART MOTOR-BICYCLES has been suspended; if, however, you are interested in our post-war programme and will send us your address, immediately particulars are available we will post them on to you.

Do not forget we were one of the pioneers of the lightweight Motor-Bicycle.

Business established 1884.

HOBART CYCLE CO., LTD.

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Hobart Works, COVENTRY, England.



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ensures smooth running

C. C. WAKEFIELD & CO., LIMITED
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PLAYER'S "COUNTRY LIFE" CIGARETTES.

THE MANUFACTURERS
REGRET THAT UNDER
PRESENT CONDITIONS
IT IS IMPOSSIBLE
FOR THE OUTPUT
TO CORRESPOND WITH
THE GREATLY INCREASED
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JOHN PLAYER & SONS, Nottingham

BRANCH OF THE IMPERIAL TOBACCO CO.
(OF GREAT BRITAIN & IRELAND) LIMITED.

MOTOR CYCLING

AVON TYRES



THE safest, strongest and speediest of all-rubber anti-skids, and unrivalled for the driving wheels of high-powered machines, especially those used for heavy sidecar or pillion passenger work.

The "Sunstone" is manufactured by the exclusive Avon Electro-hydraulic process—the latest and greatest method of tyre-building. It has a 4-ply Egyptian casing of enormous strength and—an important feature—two plies round the beads.

An exceptionally thick tread of tough rubber ensures long life and unusual freedom from cuts or punctures, while the unique design of clear-cut grooves, closed at each end, provides a really effective anti-skid.

THE AVON INDIA RUBBER CO., LIMITED,
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